THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

PUBLIC ADDRESSES
BY
W. P. WHITSETT

CHAIRMAN OF THE BOARD OF DIRECTORS
OF
THE METROPOLITAN WATER DISTRICT
OF
SOUTHERN CALIFORNIA

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Our project sold itself, the reassuring significance of which will be apparent if I tell something of the hurdles we had to surmount.

First, we had to get by the engineers - a board specially constituted to safeguard the transactions of the Reconstruction Finance Corporation which was bound to be swamped with applications. This Board is composed of engineers of outstanding position and leadership in their respective fields. They came to Washington in the heat of the summer, at the personal solicitation of the President, and are bringing to bear a degree of ability and diligence that is indeed deserving of the gratitude of the Nation.

Their study of our project was exhaustive and thorough, for they had to satisfy themselves and in turn to be able to satisfy the Board of the Reconstruction Finance Corporation that our project was sound and worthy, that it was self-sustaining, that it was of an urgent nature, that it could not otherwise be financed, and that it would serve in large measure to relieve unemployment. Fortunately our own engineers and consultants are so well and favorably known and their studies have been so exhaustive that, notwithstanding strong opposition and protest on the part of some who have opposed our policies, we were able to get by much more easily than would otherwise have been the case.

Coincidently with the examination of the Engineers we had to meet a searching investigation by the legal department of the Reconstruction Finance Corporation, an examination which, as a matter of fact, constituted our most critical hurdle, but which we were finally able to surmount.

Then, finally, came the Board of the Corporation. That, as you know, is a most representative Board. Headed by ex-Senator Pomerene, it is non-political, although predominantly democratic in its composition. Here we had to face renewed concern as to the urgency of our project, the amount to be granted, and the rate of interest. Fortunately, here, too, we had the advantage of a superior personnel in the make-up of the Board - all are men of large affairs, of broad experience and of profound understanding.

In the background, however, was the wisdom and influence of the President. He, as you know, has had very much at heart the safeguarding of the Southwest through the control and utilization of the Colorado River. Our Aqueduct has appealed to him as a complementary to the project as a whole - as the step next in order for the realization of all the advantages contemplated. And so he was wholehearted in his support of our application and most helpful at various stages of the negotiations - in fact, it is no exaggeration to say that but for his resourcefulness and

intervention on several occasions our mission might have met with prolonged delay, if not failure.

As to the outcome, I think we have abundant reason to congratulate ourselves, for we have the assurance of sufficient funds on favorable terms to carry forward the work for two years - few undertakings in the country are so well off! Our engineering investigations, involving an expenditure of upwards of $3,000,000, have been carried out with such thoroughness and plans and specifications have been so far completed, that we are in position to start the work with a minimum of delay. And we have confidence in the wisdom of our procedure. We are not, and have not been, unmindful of the problematical factors involved, but we also recognize that our responsibility is of a different order from what it would be in a private undertaking - that, in the light of the historical records of rainfall, we are not warranted in hazarding the welfare of this community by risking a bet as to whether the next few years will be wet or dry - as to whether our growth in population will conform to probability - or as to whether some other departure from the conclusions of our technical advisors might not be possible.

Our point of view is that we have been set to do a job - that we are doing it to the best of our ability and in accordance with engineering opinion of the highest order - that so much of the problematical is involved that in some particulars things may not work out altogether as contemplated, but that the departures, whether favorable or unfavorable, will not be beyond the resources of adaptation. Furthermore, we are not indifferent to the matter of opportunity - we recognize, as do all men of affairs, that "there is a tide in the affairs of men," that opportunity must be seized when it is offered, and that by all the rules of success we should take advantage of the particular opportunity now afforded by the Reconstruction Finance Corporation.

So we are going ahead, boldly but not incautiously, for if we are primarily actuated by regard for the community as a whole, we are not insensible to the interest of taxpayers.

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THE COLORADO RIVER AQUEDUCT

Presented at a Joint Dinner Meeting of the
Los Angeles City Club and Municipal League

November 21, 1929

On December 6th, The Metropolitan Water District of Southern California will be just one year old.

During the past year a vast amount of work has been done on the problem of bringing water from the Colorado River to Southern California.

The District engineers are now working on more than fifty different possible routes.

All of this data is to be turned over to a Board of Review composed of three of the most able engineers in America. The members of this Board are A. J. Wiley, Thaddeus Merriman and Richard R. Lyman.

It will be the responsibility of these three great engineers to select the best possible Aqueduct route, all factors being taken into consideration.

All this activity is leading directly and surely to the task of actual construction of the Aqueduct. But before the first steam shovel picks up its first load of dirt, the project must be financed. It will be necessary for the people to approve the project and vote the bonds before it can advance beyond the planning stage.

Our government is founded on the principle that the will of the majority of our citizens is right. It may be added that thinking people will arrive at the right conclusion if they know the facts.

Our voters should know the facts about this great project, and of the conditions in Southern California before they go to the polls. It is a civic duty to do so.

Quite naturally we ask, "Well, what are the facts?"

Today people are generally aware that Southern California is a desert or semi-desert region. In this

fact lies its greatest charm. If it were not so, we could not boast of 355 days of sunshine in a year.

It naturally follows there can be little rain and consequently meager water supplies where there is so much sunshine. However little or much the general public may know about the scarcity of water, the farmer and the waterman are well acquainted with the facts.

It may be interesting to you to hear a little about my costly education in the water resources of Southern California. I came to California about 23 years ago from Indiana. Our problems there had always been concerned with getting rid of excess water.

I moved to Southern California, bought a ranch and built a house on it, perfectly confident that the world was a hollow sphere full of water. When my well drilling outfits got through looking for water the country around there looked like a Swiss Cheese, but I didn't find a drop of water.

I later moved over into San Fernando Valley and bought a ranch.

At that time the Owens Valley Aqueduct was being built. We thought that 400 second feet of water would be enough for all time.

When we couldn't get the water in San Fernando Valley, I started drilling wells--and was forced to connect up by under-ground drains to every little wash that would yield flood water to grow crops.

Then came the Owens Valley water and the country was alive with growth and prosperity.

Now, after twenty years, we are beginning to find ourselves in the same place we were then.

The City of Los Angeles has grown from a community of 160,000 to a metropolis of 1,375,000 and the last available resources of water are rapidly being put to use.

To take stock of our present situation, Mr. Harold Conkling, Chief of the Division of Water Rights of the State of California, made a recent study, the results of which are startling. His report reveals a progressively increasing shortage of water in Southern California.

We know that the artesian area which existed on

this coastal plain in 1888 has been reduced from 315 square miles to 55 square miles, and is yearly becoming less.

As the water table goes down, the inflow of salt water from the Pacific Ocean is even a greater evil because it is rarely realized until the harm is done.

The tremendous importance and great value of these natural underground storage basins cannot be overestimated. On a basis of the cost of some of our surface reservoirs these great natural reservoirs of the central coastal plain are worth almost one-half the assessed valuation of our city. We simply must vote these Metropolitan Water Bonds when the time comes -- not only to protect these basins from salt water incroachment, but to have additional water to draw on.

We are sometimes asked, "What will happen if the necessary bonds are not voted by the people?"

Not even a confirmed optimist would declare that a city can grow beyond its capacity to supply water to the people. To analyze the situation further would be simply to enumerate the consequences of industrial stagnation. We must move onward -- building and expanding.

If there should appear doubt in the public mind, it can only be because the voters are not informed -- and the cure for that will be to discuss the bare, cold, naked facts and -- they are sufficient to leave no question of the absolute necessities.

On my recent visit to Washington, I had occasion to talk with one of our national forward-looking statesmen. In the course of our conversation he made a statement which to me was both startling and interesting.

He said, "There are two great migrations of people taking place in the world today; one is the great movement of the Chinese into Manchuria, and the other is of Americans into California."

The only thing that can hold back this influx of people, and is doing so to a certain extent today, is the lack of the necessary water resources for expansion. To accelerate this movement we have the great demand that will be created for labor and

materials necessary to build the Boulder Dam and the great Aqueduct.

The financing of these two great projects would be in line with the program now being fostered by President Hoover of stimulating economic progress by wise public expenditures.

However great the benefit to Southern California will be through the money directly expended on these two projects, the greater benefits will come from the influx of people who will fill the vacancies in our houses, stores and office buildings. When the slack has been taken up, expansion will follow in every direction until ten years from now, we are told, twice the present population will live in Southern California.

It is this growth that will be a direct economic benefit to the taxpayer. The laborer will benefit by the increased demand for his services, giving him better employment and higher wages. The carpenter, plumber, mason and artisans of all kinds will participate in the great building and construction program necessary to provide for the millions of people who are coming.

Quite naturally it will follow, that business, commerce and industry will expand accordingly.

The destiny of all Southern California is wrapped up in the successful construction of the Boulder Canyon Dam and The Metropolitan Water District Aqueduct.

When people study the problem with the full knowledge of the facts, they will come to the conclusions I have stated to you here tonight. The people will investigate this project before voting bonds, and I am confident they will support it on the basis of necessity and of the benefits to be derived.

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MEETING OF HIGH SIERRAS RECREATION ASSOCIATION

Saturday, April 6th, 1929

at Ed. Seymour's Lodge Dude Ranch, Big Pine, Calif.

FELLOW CITIZENS:

Since the day of Rome, "Citizen" has been a term of honor. Here tonight the words have a special and greater significance.

Fellow-Citizens, which I hope you may be, of this State's greatest city - a city whose growth is limited only by the expansion of her attractions to tourists, and her supply of water to care for them, I am glad to be able to discuss with you some of the problems that mutually confront us.

My message to you tonight is but a short one. I seek only to invite your thought to the proper solution of our mutual problems of future progress and achievement.

We have been privileged, each his own little part, to share in the creation of a new and advanced civilization here in the Southwest. We are developing a culture typically Californian, along with material growth beyond precedent in history. Each in our own degree has been giving something to it. Perhaps we have been too close to get full vision of its greatness and world-wide importance.

Let us together give thought to what we can ourselves do toward helping along the plainly manifest destiny of our co-related regions.

We have come together here in the Southwest, gathered from the length and breadth of the nation, and from all the world - and it is such as we who have been privileged to make our homeland what it already is. Shall we stop short of what lies plainly in sight ahead?

More than ever does the future of this Southwestern Empire lie in the hands of its makers. It is up to us. Let us consider it, not with the narrow viewpoint of selfish prejudice or personal advantage, but as men of breadth and vision. We must realize that the best policy for our ultimate development as a whole must necessarily be the best policy for every man, woman, and child in it.

Let us throw aside unwarranted suspicions and discuss the mutual features of our relationship. The time is about here when we must dispassionately consider the relationship which had developed between the City of Los Angeles and the people of the Eastern Sierra valleys. The past is gone, and the future is upon us. Now is the time to lay for this splendid region a solid, practical and legally sound foundation that will finally and forever end any fundamental differences that have been inflamed between us in the years now gone.

The City of Los Angeles and the Valley of the Owens River are naturally united by every tie of common blood and business connection. Geographically and topographically you are the keepers of our water supply and the friendly hosts of our happiest pleasure moments in Eastern Sierran recreation grounds. Can you of this valley not gain greater power and development as an integral political part of the city, such as the Rocky Mountain Park of Denver, than as an isolated region?

Who ever heard of the Rocky Mountain Park until the City of Denver 60 miles away, through an enabling act, annexed and developed it?

At once, every traveler, every sportsman, recognized that the Rocky Mountain Park must be the central gem of all that region, otherwise the entire people of the City of Denver would not have burdened themselves with its care, and proudly linked it to the fame and glory of their metropolis. Every traveler feels the urge to see that Park.

Now, let us link the destiny of this region to the greater fame of the most famous tourist city in the world, and it will not only bring to this region a one hundred per cent prosperity, but it will go beyond our most hopeful conceptions.

The story of the 2000 glacial lakes of Los Angeles will challenge the credulity of every traveler and every citizen and become a dominant feature of her fame. The High Sierras Park will be linked in the mind of men wherever the famous name of Los Angeles is spoken. Please do not think I overrate this result. What is it that usually brings up the name of Denver for discussions? What feature has made you read of or discuss Denver in recent years?

It is her Rocky Mountain Park. And this Rocky Mountain Park gives a wideness to the fame of

Denver and a lure to visitors, that factories, products, or financial greatness could never obtain for her.

The Good Book tells us that the last shall be first; and it should thrill every homeland resident of this region that the growth of Los Angeles shall be linked with and caused by the marvelous grandeurs of our Sierra Alps.

The time has arrived to consider annexation of these mountain valleys to the City of Los Angeles, as the best and only possible means to successful progress in the future. Our legislature is in session. The necessary enabling act is before it. All that Senator Carter's Bill undertakes is to make it possible for you to join the City; it does not in the least bind you to do so. After the Legislature passes the law permitting the action, you, and you alone, must make the decision. But, if the Carter Bill is not passed now, nothing can be done for two years, until the 1931 legislature meets.

The future of the City of Los Angeles should be joint progress with this High Sierra region. Los Angeles cannot live her destiny without a continuing increase in her tourist and outing attractions and the Eastern Sierran sources of water supply. Neither can this region attain maximum development without the physical, financial, and sentimental support of the City.

These things the past has determined. We could not change them if we would. Fortunately, we do not have to change them. The vast growth and ever greater and compelling influence and power and patronage of the City of Los Angeles gained through the years are yours now for the asking. Collectively we can accomplish everything. Alone and individually, you can accomplish nothing compared to your possibilities under intelligent cooperation as an integral part of the City. Now, we have only to combine our common interests along these plainly indicated lines of mutual advantage to grow great together.

The future of the Owens Valley and Eastern Sierras generally is greater than our dreams. I picture an American Switzerland, capitalizing attractions by nature far surpassing the offerings of Alpine Europe. I envision a fertile mountain valley colorful with the camps and playgrounds of a two million population, musical with the hum of produc-

tive food supplying industry, its still virginal waters teeming with trout and its hillslopes with artificially increased native and introduced alien game, attracting sport-seekers from all the world. I see the snows of winter fully capitalized in their attractiveness to round out the all-year business to profit a large and happy population dedicating itself to the wholly honorable vocation of catering to human health through wholesome outdoor recreation. And much more besides; a community largely self-supporting but never self-sufficient.

Now - all these things are possible, but there is only one way to attain them within our lifetime. That is by making it legally possible for the City of Los Angeles to throw the tremendous power of its ever increasing growth into the building of your future.

We hear much about damage to the commercial activities of these valley towns, and a feeling that some recompense is due those who have lost trade by the departure of their country customers who sold their ranches and left the Valley. Only a few of you have understood that this is a new economic problem in civic life that never in past history has arisen; a problem that can only be solved when the consent of over a million people in the City of Los Angeles renders it possible. I am not here to question local feelings or even to analyze them; only to suggest the one remedy by which we can join on a common ground. It takes two-thirds of the people of Los Angeles to pass any bond issue such as is necessary to purchase the remaining property interest in Owens Valley. Such a bond issue will undoubtedly pass to purchase property that will become a part of the City, when its passage may be doubtful, without such expectation.

That is but one of the more immediate arguments for annexation. It should be done now. A little later the City will face the enormous bond issues necessary for the Colorado aqueduct. Do you not agree with me that all Owens Valley matters requiring bonding should be cleaned up before that time? Delay is dangerous. Remember that we have the problem of raising the funds. The present Legislature under proper representations from Owens Valley favoring it, will probably pass the Carter Bill. If you do not want that bill, we certainly should not waste energy on it. There would be no use. But without the Carter Bill, should you awaken to this opportunity in another month, it would be too late.

Many of the activities proposed in behalf of the Eastern Sierras are legally impossible so long as this section remains outside the corporate limits of Los Angeles. Once included, city officials can lawfully do those other things which, if done now, might become a personal liability upon the officials who hope to help you. I refer to advertising, development, patronage and all of those activities you have lacked the necessary money and weight to force, which can be yours for the asking. But it is you that must ask and act. We have done our part in presenting the Carter Bill. It is now up to you.

Under the Carter Bill you can exercise your choice of trusting your future and prejudicing your manifest destiny to some small group of individuals who can command only the tiny political weight of your present sparse population. Or, upon careful study, you may enlist with one effort, the high spirit, the unlimited and ever-growing power and influence of the greatest city in western America, and make this marvelous region the most famous recreation park in its line.

Would you not feel that you were bequeathing your children a man's birthright by thus tying them into the enormous and certain future of the City of Los Angeles, by thus making of yourselves an actual and integral part of her marvelous progress and sharing in her world-wide fame as a tourist playground?

The logic - to me - seems irrefutable. Is it not worthy of your careful study and discussion?

Remember, the passage of the Carter Bill is only a necessary preliminary. All the details of annexation can be and must be arranged mutually between us. The consent of a majority of both parties must be obtained. Nothing is risked now. The hearty cooperation of the Owens Valley towns at once will allay any feelings of doubt at Sacramento. The Legislature can only give you the power to probe and register your opinion after due consideration. I favor annexation because it makes possible the approval of our public to measures that would be unwise for us as officials to suggest until you are a part of the City. There is no time to lose about this Carter Bill, but there is all the future to discuss and adjust all of the details as to local government.

Once that the City of Los Angeles buys the remaining property in Owens Valley, those of you who see the future of this section can arrange, no doubt, with the City to lease back your present business sites

at a fair rental. Remember that under annexation, you will be an integral part of the City of Los Angeles, with your voice in it, under arrangements to be worked out before you vote on the question of annexing.

Now folks, these are the views, not of a stranger or a newcomer, but of one who has been coming to Owens Valley over 20 years, one who has seen and experienced all that our Eastern Sierras have to offer the health and recreation seeker, one who has benefited by all these enjoyable contacts and is anxious to help you pass to posterity all of these priceless recreational assets, improved, extended and multiplied by the combined resources of the giant metropolis of the West. All achievements of your life have rested upon decisions made after careful discussion. I ask you to go to Sacramento and get the Carter Bill passed so that we may have the discussion. Your decision will then follow - as your judgment dictates.

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1929-30

STATEMENT

1929

Nature made Arizona and Southern California one geographic unit; man has divided it into two political bodies, but that does not alter its natural unity.

The interests of Arizona and Southern California are identical. We know that the Boulder Dam project will return far reaching benefits to Southern California by providing permanent flood control, water conservation and hydro-power available for purchase and use in our homes and factories. Arizona is bound to share in these benefits.

An increasing population in California means a growing market for Arizona products. During the past year Southern California purchased approximately $15,000,000 worth of Arizona beef, dairy products and minerals. Boulder Dam development will mean a more populous and prosperous Southern California and it also will mean a greater demand for Arizona products in that area. Southern California is dependent upon the products of Arizona and we believe Arizona needs the markets of Southern California.

It has been stated that the people of Southern California, within the last ten years, have invested more than $35,000,000 in Arizona securities. We, therefore, are vitally and directly interested in the future welfare and development of our neighbor state. With more than $35,000,000 invested in Arizona, the people of Southern California are just as anxious to see that state prosper as are the residents of the state itself. And we are convinced that the best possible security for our investment is the Boulder Dam development project on the Colorado River.

Every new resident in Southern California is a new consumer of Arizona products. Boulder Dam water and power made available at reasonable rates to the cities of Southern California will enable those cities to support ever increasing populations and constantly expanding industrial operations.

These growing populations will create a greater and greater demand for Arizona products. Industrial development on the Pacific Coast, likewise, affords an economic method of fabricating the raw materials of Arizona for the markets of the world.

It has been estimated that no less than 730,000 automobile tourists visited Southern California during the past twelve months. A large proportion of these motor tourists traveled through Arizona on their way to California, and their numbers will be multiplied

many fold when Boulder Dam development work once is actually launched and underway.

Arizona and Southern California inseparably are bound together, geographically and economically. A program of Colorado River development that will benefit California cannot avoid greatly benefiting Arizona as well.

I sincerely trust that the Reno Tri-State Conference will bring about an agreement that will enable us to push forward immediately the development of the Colorado River - the greatest of all resources of the Great Southwest.

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STATEMENT REGARDING PARKER ROUTE

1929

With the Colorado River water safely provided for, Los Angeles may fling wide its doors and prepare to double its population, double its wealth, and enlarge its world importance within the next twelve years.

Use of the great supply of Colorado River water and power in this area will serve to create literally billions of dollars in new wealth. But Los Angeles does not need to await the actual bringing in of Colorado River Water and power to reap the golden benefits that abound and are ready for the taking.

We have been going slowly and carefully on making demands on our reserve water resources immediately available. But assurance of the Colorado River project will enable Los Angeles to utilize to the fullest extent our existing water resources.

Our available resources, including the Los Angeles river and the Owens river aqueduct safely will take care of 2,500,000 population. Under normal rainfall conditions we have as a maximum enough domestic water to serve about 2,500,000. In order to supply the water needs of this large number of persons we must develop to their utmost all of the underground sources in the San Fernando and Owens Valleys. It will be necessary to use all the water that comes down from the mountains.

Certainly it would be unwise to exhaust these reserve water supplies if we had no other major water supply within reach. However, with the assurance that Colorado River water will be available for domestic consumption in Southern California within the next 12 years, it is not only safe but the part of wisdom to encourage such an increase in population as will make necessary the tapping of these reserves.

Judiciously utilizing the water we shall have available we will meet all the requirements of the great influx of people who will be attracted to Los Angeles in the next decade. In that period we will surely double our population.

If we double our population, it follows as a natural matter of course that we will double our wealth and payrolls. In short, our whole economic structure right down the line will be strengthened twofold.

The benefits accruing from an immediate and uninterrupted forward movement in the development of our present resources will be amazing. Our progress

will be on a secure basis knowing we have the Colorado River water protecting our development and enabling us to draw on our now available resources without limit or fear.

With a population of 2,500,000 at the time the Colorado River water and power are made available, a market will be ready to put it to immediate use.

Meanwhile, I believe it would be wise business policy for Los Angeles, through its various electric distributing mediums, both public and private, to schedule a power rate for industry even lower than the extremely low power rates now in effect.

Speaking purely as an individual citizen, I am firmly convinced that the result of such a power rate reduction will be to draw to Los Angeles huge industrial plants from every section of the country.

I staunchly believe that a careful economic study of the situation will reveal that it would be extremely good business for the City of Los Angeles and private utilities serving power now to establish such a low schedule of industrial power rates as will irresistibly draw to this city a great number of new and large manufacturing consumers before Boulder Dam power actually is brought in, thereby creating much additional employment.

We are on the threshold of the Southwest's greatest development. The era of unprecedented expansion and industrial growth is at hand.

To be sure, we cannot stop the tide of population growth. But we can be ready for it and offer such inducements to eastern capital and industry that they will be practically forced to come here to utilize the advantages we offer.

Manufacturing should be done here on such a large scale that the products will pour out from this golden west to the markets of the world and especially into eastern centers more extensively and more economically than is now possible.

Mr. E. H. Harriman, great railroad builder, once made this remark:

> "Los Angeles will become the leading industrial center of the world, and before the middle of the present century. Twenty-one years from now Los Angeles county will be

will be on a secure basis knowing we have the Colorado River water protecting our development and enabling us to draw on our now available resources without limit or fear.

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Mr. J. H. Herridge, great railroad builder, once made this remark:

"Los Angeles will become the leading industrial center of the world, and before the middle of the present century, twenty-one years from now Los Angeles county will be

> one vast community of small, scientifically conducted home farms, great factories and industries, a combination of dozens of towns all grown together into one great community - and the abode of 15,000,000 or more people."

We are realizing today that his predication was not based on idle speculation but on the certain destiny of the Southwest.

What will happen when Boulder Dam water and power are brought into Southern California is a foregone conclusion. That may be a dozen years hence, or sooner. Between now and then will be a prosperous period. Just how prosperous remains for us to say.

The door is ajar bidding eastern capital and industry to open it. A slight push on the door and it will open to a vista of achievement. I think one of the certain ways to swing open this door of opportunity for large business enterprises is to prepare for the population growth by utilizing all of our water resources now available and lowering our power rates for industrial purposes.

What helps one helps another. Profusely as the benefits will come to Los Angeles in the next ten years, they will fall likewise on the other growing cities of the Southland.

The settlement of these new consumers in this area prior to the development of Boulder Dam power will create a real and waiting market for that energy the moment it is made available.

Construction of the colossal Colorado River Aqueduct will be undertaken by The Metropolitan Water District.

Comprising, at the time, eleven cities in Southern California, The Metropolitan Water District came into existency by virtue of a legislative enactment which went into effect in July, 1927.

The cities in the District and their representatives are as follows: Anaheim, Anders Walfred Franzen; Burbank, Harvey E. Bruce; Beverly Hills, Paul E. Schwab; Colton, Charles A. Hutchinson; Glendale, W. Turney Fox; Los Angeles, Dr. John R. Haynes, John R. Richards and William P. Whitsett; Pasadena, Franklin Thomas; San Bernardino, William O. Harris; San Marino, Harry L. Heffner; Santa Ana, Solomon H. Finley; Santa Monica, George H. Hutton.

Other cities have indicated they may at some future date elect to come into the District and participate in the benefits to be derived from the Colorado River aqueduct.

The eleven cities now in the District represent three of the leading counties of the State. They have a total population of approximately 1,714,000 and an assessed valuation of $2,273,464,367 of which Los Angeles possesses 81.97 per cent or $1,863,559,210.

Representatives of the member cities of The Metropolitan Water District are civic leaders of vision, eager to put their shoulders to the wheel for the good of Southern California as a whole as well as their individual communities.

Preliminary to the work of The Metropolitan Water District, a comprehensive survey of the whole territory between here and the Colorado River was made. William Mulholland, builder of the Los Angeles Aqueduct, and H. A. Van Norman, general manager and chief engineer of the Los Angeles Department of Water and Power, headed engineering parties that began in 1923 a survey of routes for a Colorado River aqueduct.

The thorough survey under the direction of Mr. Mulholland and Mr. Van Norman covered an area of more than 50,000 square miles. For more than four years sixteen survey parties traveled up and down the desert region bounded by Boulder Canyon on the north, the Colorado River on the east to the Mexican border on the south and the coastal plain on the west.

To quote "The Romance of Water and Power", published by the Los Angeles Department of Water and Power: "Mr. Mulholland's engineers have accumulated detailed data on every acre of this territory, including 18,000 square miles of rugged mountain and desert country never before crossed by a surveying instrument."

The mere assembling of the engineering data has been a great task. Before the middle of summer an extensive report of the surveys will be made to The Metropolitan Water District to guide it in the ultimate solution of the aqueduct project.

Incidentally, the survey engineers supervised construction of a huge relief map showing the entire region from the Colorado River to Los Angeles and tracing the various possible routes of the proposed

aqueduct. The map recently was publicly displayed and was visited by more than a quarter of million persons.

The original Mulholland-Van Norman surveys now being extended under the direction of Mr. F. E. Weymouth disclose the possibility of a number of routes along which to carry the aqueduct. Those particularly under investigation are as follows:

Blythe route..... 259 miles
Bridge Canyon route.... 372 miles
Black Canyon route..... 343 miles
Picacho route..... 242 miles

With the exception of the Picacho route, all of the proposed routes are longer than the Los Angeles Aqueduct which is 250 miles.

The preference of any route will be determined solely on its feasibility and practicability after considering every engineering and economic phase of the great problem.

When the great mass of data contained in the report now in preparation by Mr. F. E. Weymouth, Chief Engineer of The Metropolitan Water District, is complete, the District will call to its aid a commission of engineers. This commission will be composed of the foremost engineers of America. These experts in engineering will be asked to make a thorough study of the information gathered.

After the commission's exhaustive examination it will be asked to advise The Metropolitan Water District on the most feasible course to pursue in the selection of a route over which to lay the aqueduct.

The Colorado River aqueduct will have a capacity of 1,500 second feet and will be able to supply 7,500,000 people with domestic water. The capacity of the Colorado River aqueduct, it is estimated, will be almost four times greater than the Los Angeles aqueduct which has a capacity of 400 second feet.

Everyone connected with the work of bringing water to Southern California from the Colorado River is quite aware of the size of the undertaking. The construction of the aqueduct from the Colorado River will be a monumental task. Southern California's reputation for getting things done will be given its supreme test on this job.

Los Angeles had a population of less than 200,000 when construction of the Owens River aqueduct

was started. The per capita cost of that construction was $150. Owing, to a large extent, to the additional water and cheap power the population of the City has become seven times as great in 24 years.

The per capita cost of the Colorado River aqueduct based on the present population of The Metropolitan Water District is less than two-thirds of what it was for the Owens River Aqueduct, or $100 per capita for this gigantic undertaking. As like tends to produce like under similar conditions, we should reasonably look forward to an unprecedented growth and development on the Coastal Plain of Southern California which will ultimately fulfill E. H. Harriman's memorable prediction heretofore referred to.

The desert horizon presents a picture of untold wealth and this picture is not a desert mirage. The riches are within our grasp. Although the realization of the water from the Colorado River may be a dozen years hence, there is something near at hand. That something is the development of our immediate water resources to care for a million increase in population; the possibility of cheaper power for large industrial uses; and tremendous eastern wealth rapping at our front door for admittance immediately in order to advantage by and be an integral part of the forward movement.

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THE METROPOLITAN WATER DISTRICT

OF SOUTHERN CALIFORNIA

ITS PROGRESS AND SIGNIFICANCE

Fifty-one million six hundred thousand dollars of work is now in progress on the Colorado River Aqueduct. In accordance with a sound economic program, The Metropolitan Water District of Southern California will extend its activities until the project is complete. Already completed is a very large percentage of the preliminary and auxiliary works in the form of roads, water systems, construction power lines, communication lines, camps, and the like.

A month ago, on May 13, the District held a celebration at Cabazon which formally marked the beginning of work on the San Jacinto Tunnel, the largest single unit on the project. Practically simultaneously with the San Jacinto Tunnel, has been started work on miles of other tunnels of which one section is being constructed by the District's forces, and the balance by contract.

These tunnels will have an ultimate capacity of 1500 cubic feet per second, or sufficient water for all potential requirements of the Southern California coastal plain until 1980.

While the project was undertaken solely for the purpose of supplying this area with an adequate water supply, it will also give employment to thousands of men during the severest depression in our history. If the steps towards the construction of this project taken back in 1924, had been directed solely for the purpose of relieving unemployment, it could hardly have been more timely.

The money being expended at the present time, is being derived from the Reconstruction Finance Corporation which has expressed the willingness to purchase the District's bonds to the amount of $40,000,000. The estimated maximum number of men which will be engaged in the undertaking is about sixteen thousand and will represent an average of ten thousand during the six-year construction period.

In addition to the work being conducted by the District, there must also be borne in mind the construction by the City of Los Angeles and the communities associated with it, of the power line to Boulder Canyon

and that dam itself, and the other related projects. Together these undertakings represent probably the greatest and most constructive program ever undertaken in any similar area.

While all features of these various projects are of the greatest importance in their respective areas, one of the underlying principles upon which the whole is predicated, is the necessity for water. The dam at Boulder Canyon will conserve water which the aqueduct will convey to Southern California.

We are now approaching the summer of this year. The records clearly indicate that we have just added another dry year to the cycle of subnormal rainfall which has endured for sixteen or more years. Records indicate clearly that we may not be unreasonable in expecting it to continue for twice as long or even more. In the meantime we are faced with a continual diminishing of reserves, as all thorough Californians in their hearts must admit. Each succeeding year sees the water in the wells at a lower level. Along the coast, salt water is working its way inland ceaselessly. The fall of this year may see some communities and some valuable orchard areas faced with a critical water shortage.

The further continuation of drought and attendant consequences show more clearly than ever that the thirteen cities of The Metropolitan Water District were none too soon in initiating construction of the aqueduct.

To the future growth and development of Southern California, the Colorado River Aqueduct is as essential as the air we breathe. We are now entering upon a new era of dynamic progress comparable in magnitude with any experienced in the past. The present value of real estate, the security of money invested in it, and the appreciation of its values, depend unmistakably upon an adequate and certain water supply.

For some time economists have been pointing out that the next period of our history will be one of industrial decentralization. Industries will move closer to their markets. Manufacturing plants will be smaller but more numerous and more widely dispersed. The long distance transmission of electricity at low cost, and the efficiency of our transportation system have eliminated the necessity of concentrating industry into relatively small areas.

No place in the world is so ideally situated and adaptable to efficient manufacture as is Southern

California. All of the elements are present: cheap hydro-electric power, an abundant water supply in the process of acquisition, extensive and diversified stores of raw materials and commidities, a growing local and international market, an abundance of low price fuel, a large and contented labor market, and, equal to any of the foregoing, a climate which permits continued production throughout the year at a high rate of efficiency and a low rate of cost and maintenance.

There is another factor which in my opinion is outstandingly in favor of this area in the industrial competition of the years to come. That is, with an adequate water supply, the abundance of highly fertile land can be subdivided into units of approximately an acre where the working man engaged in industry can provide himself with a home and garden capable of supplying at least a part of his food requirements. A twelve months' growing season enables him to produce with a minimum expenditure of time and effort, high quality produce for his table throughout the year. With the reduction of daily working hours and the hours of employment per week, the individual will in the future have more opportunity for home garden activities than has heretofore been the case.

With industries dispersed throughout this area, in each case surrounded by pleasant homes with productive practical gardens, we will have accomplished a restoration of a balanced economic system. The worker in such cases will not be solely dependent upon his wage. In times of depression and in old age, he naturally and with contentment falls back upon the productivity of the land and his accumulation of savings.

Real estate, now with the assurance of the Colorado River Aqueduct, will enter upon a new phase of development of the kind I have indicated. Those in the profession who are wide awake to the possibilities will realize the fundamental truths that I have indicated.

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WATER FAMINE PHANTOM
1929
Los Angeles: What Will You?

An adequate water supply and economic progress are synonomous, inseparable terms.

An inadequate water supply and stagnation and desolation are also inseparable companions.

Six years ago the City of Omaha was partially out of water for a few days.

A panic of fear arose.

The City of San Francisco burned to the ground when the earthquake temporarily disabled her water system.

We of Los Angeles are an exotic people coming here mostly from humid climates.

In this semi-arid land the hot breath of the Desert seeks to wither vegetation and the salts of the Ocean seek to corrode it.

There are antagonistic natural forces which men must cope with in desert places.

It should bring forward the best men with the most constructive brains of the city, willing and ready to serve as they would if their own and their neighbors' homes were burning down. Due to the constant lowering of the underground waters in Southern California, salt water has already seeped in and rendered unfit for use wells far back from the ocean at El Segundo and vicinity.

An artesian well bored in the vicinity of Long Beach a generation ago spurted 60 feet above the surface of the ground, while today it is being pumped from a water table 50 feet below the surface. This is a drop of 110 feet.

Into this constantly-increasing void under our cities, the corroding salts of the ocean are inexorably seeping and creeping.

Necessity impels Pasadena to petition 30,000 acre feet annually of flood water from the San Gabriel River. The San Gabriel River is the source of the supply for the water basins under Long Beach and other

towns. Consequently, legal controversies that will prove bad advertising have arisen.

Near San Francisco another encroachment movement of the Ocean salt water has occurred.

On the Northern arm of that harbor, upon the Carquinez Straits and the broad Suisun Bay, many towns and a number of large industries were located some years ago. The waters were kept fresh by the flow of the Sacramento and San Joaquin Rivers.

The memory of man could not recall when those waters had not been fresh.

Population and agricultural development of the upper valleys diverted the flows of those rivers so that in 1924 the salt water from San Francisco Bay had penetrated 26 miles further inland than ever known before.

No great additional development has taken place in that region since.

One great industry existed by means of tank barges bringing down from the upper river two and one-half million gallons of water daily. The water cost that industry 50 cents a thousand gallons, or $1250 a day.

A number of small cities suffered by stagnation of their industrial progress.

Thousands of acres of the richest agricultural land in the world in the delta islands of those rivers felt the menace of salt water encroachment.

History reveals to the archaeologist spectacular pictures of destruction from drouth too numerous to mention here.

We are not suffering a crisis in Southern California.

But - a crisis surely impends.

I am impelled to these remarks in the spirit of the old family doctor to the patient with a surplus of energy and a lack of strength.

Picture the panic of fear that occurred in Omaha by a partial shut-off of the water for a few whole days!

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Picture the panic of fear that occurred in Omaha by a partial shut-off of the water for a few whole days!

Imagine that condition in any city of major size! The roads from the city would be jammed with fleeing inhabitants; the fires of destruction would consume what remained.

Picture a city in an arid land where highways could be choked with fleeing inhabitants without water. Picture the mountain passes and the desert highways blocked by fear-driven people frantic for water.

Create a picture of any important ocean-front city waking up to find that Salt has seeped inland to pollute the water supply in the overdrawn wells.

Happily Los Angeles has no such immediate possibility.

Happily we have enough water with moderate expansion, but without annexation or unusual progress, for a ten-year period.

But this margin is altogether too slim, when our use of water increases to 86 acre feet per year in the most congested center of the city, where formerly 1½ acre feet was sufficient.

We will make use of every water source available. There can now be no sense of human security or financial safety without the increased supply from the Colorado River; a supply should be maintained at all times sufficient for 25 years ahead. The phantom of insufficient water is already casting its shadow on future transactions.

I would hesitate to emphasize these fundamental facts were the crisis not altogether too near and the solution of it happily provided for in the enactment of the Boulder Dam Legislation.

It is not a problem that can longer be discussed in chambers. The situation is known throughout the financial and industrial world.

A recent article in the Saturday Evening Post entitled "Thirsty Cities" stated very plainly to all who could read that the water plane under the whole five counties of Southern California was rapidly falling. This means that 31 of our southland cities are depleting their underground water reserves from which comes the largest part of their local supply.

And next to the air we breathe, is the water we drink.

Facts so disseminated are by no means a desirable type of publicity. However, there is comfort in the knowledge that the legislative solution of the problem has been provided. It only requires the forward, confident, vigorous action for which Southern California has ever been noted.

In addition to the passage of the Boulder Dam legislation making possible construction funds by the Federal Government, we have all the necessary State legislation in the Act under which The Metropolitan Water District of Southern California was incorporated. In the District already are united eleven of our Southern cities, representing 65 per cent of the population and a greater percentage of the wealth.

Surveys and studies have been made and revised.

A board of consulting engineers has been selected by The Metropolitan Water District, consisting of three of the most eminent men in the engineering profession, known for their experience in great National and world-wide projects.

This board of consulting engineers is comprised entirely of men outside of the State. Their duty will be to select the route that is physically practical upon the basis of the soundest economic principles.

The personnel is as follows:

Mr. A. J. Wiley, who reported recently on enormous water projects in India for the British Government; Mr. Richard R. Lyman, a member of the Board of Review engaged by the Chicago Sanitary District; and Mr. Thaddeus Merriman, Chief Engineer of the New York City Water System, having resources of $252,000,000.

I master all fear that the Colorado River project can be much delayed or injured by the carping criticism of publicity-seeking engineers or factions working for self aggrandizement.

The representatives of eleven cities are bound together in The Metropolitan Water District. It is their duty and problem to make sound our common inheritance. They have created this eminent, disinterested, umpire-Commission of distinguished engineers and will empower and delegate to them the responsibility of determining the most practical and economical route for an aqueduct from the Colorado River to the Metropolitan Area of Southern California.

After the route is determined by the competent engineering Commission the matter will be laid before the people of the district in a bond election to carry it through. Therefore, it is plain that the issues of pumping lifts and gravity routes, and so forth, should be addressed, through normal channels, to the Commission of outside engineers who are charged with the responsibility thereof.

Neither singly or collectively could the members of the Board of The Metropolitan Water District be responsible for such a technical decision. Its hope is that the waters of the Colorado River will in due time flow into the water mains of these Southern California cities without trouble or delay by incomptetent opinions.

Any attempt to becloud the people's mind by perverted controversies of these intricate engineering questions of route become perfectly transparent upon examination.

Speaking for the protection of my associates upon The Board of Metropolitan Water District, I take the liberty now and believe it the duty of my office, to discuss each situation plainly and candidly with all the folks whose homes and happiness are dependent upon this work. Contention with selfish interests will undoubtedly occur.

In the question of route selection, a gravity flow canal would mean scores of millions of dollars expended for reinforcing steel, cement and other construction material.

Contrariwise, a route involving pumping and lifting would mean millions of dollars' in expenditures to manufacturers of motors and pumping equipment.

Real estate values will fluctuate depending on the route selected.

Past history is the basis of my faith that all these commercial contentions will be eliminated in the traditional spirit of achievement which has made Los Angeles great. With water, every citizen, every commercial unit must be on tiptoes to thwart and forestall selfish objectives.

Southern California has indeed been fortunate in having her former aqueduct moneys spent wisely and the desired results achieved. In the histories of American communities this has not always

been the case. The Colorado River Aqueduct must be built in the characteristically efficient manner of the Southland.

Therefore What Will We?

Seven vacancies exist in the Metropolitan Water Board. Mayor Porter can make these appointments.

Will our big, outstanding men of business and financial experience accept the call to this greatest public service? Will they serve without pay and perhaps possibly subject themselves to the abuse of malignant and selfish interests?

Will the executive boards of our greatest enterprises allow Mayor Porter to draft their biggest men; the men whose abilities will insure a repetition of the Owens Valley aqueduct success and will anchor the faith of the people in this area to their hopes and prayers for a continued progress?

Mayor Porter may be depended upon to make the right choice with proper cooperation from our citizenry. Is he to be frustrated by the modern attitude that big men are too busy to do anything for public service?

These seven appointments represent the balance of control in the Los Angeles City representation. They will have the power to create policy.

My fellow directors of this momentous undertaking have the right to expect that Los Angeles, of her biggest and most experienced men, will give her best and not leave to the Mayor a mere Hobson's choice of self-seekers.

I am pained to hear and discouraged to know of some who declined when asked.

I wish that the Mayor would select these men who ought to help safeguard and insure the foundation of community progress and publish the list. Then everybody pledge your support and aid to the men that are drafted.

I cannot think of one man who has the right to refuse. In spending two hundred million dollars, a community enterprise is entitled to the support of the best brains and business ethics that the Southland affords.

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MEETING OF PRESENT DAY CLUB

February 24, 1930

Mr. Chairman, Ladies and Gentlemen:

I have the privilege tonight, as Chairman of The Metropolitan Water District, to address you, upon the invitation of your club.

With respect to The Metropolitan Water District of Southern California, the City of Riverside is in a unique position. I am told that one of your citizens, Mr. Evans, was a leader among the energetic individuals who, by their untiring efforts, laid the foundation for The Metropolitan Water District. I refer to the activities of the Boulder Dam Association and the Colorado River Aqueduct Association. The unique part of the situation arises from the fact that though your city contributed so much to the development of The Metropolitan Water District, it is not itself a part of it.

A short time ago, in reading an account of Southern California written in the nineties, I ran across the following statement. The writer was speaking of the conditions of growth existing in Southern California in about 1875. He was referring to the great activity of the pioneers in the region of Riverside at that time in attempting to perform profitable agriculture in what at that time was considered pretty much of a hopeless desert. In referring to this period he says:

> "Few undertakings could seem more hopeless than the raising of anything on the dry slope, hard and bare as the floor of a brickyard, where Riverside now glows in beauty. Yet its founders were firm in their faith. They let the laughers laugh and devoted themselves to the water ditch and the cultivator. Before the owners of the rich bottom lands had finished their smile, three thousand acres of this wretched looking stuff were bringing the owners more money to the acre than any other equal area in the United States."

You will note that the key-note of the undertaking of those pioneers was the getting of water on the soil. The problem had not entirely to do with

getting water on the soil in some portions of this area, in fact in places the water occurred so close to the surface that in a succession of wet years orchards were ground out. I dare say it would be a difficult thing to find a spot of any considerable size where that would be possible today. What has become of these high water tables? You people in this area know far better than we who live closer to the coast. You are in contact with the actual situation. Your farmers know in how many feet and inches the water level drops each year. We have people coming to the District office continually, wanting to know about The Metropolitan Water District, telling us that their wells have dropped fifteen feet in a year and in some instances have gone completely dry.

One of your foremost water authorities in this region has been quoted as saying that the Southland, without a future artificial supply of water, would be as worthless and tenantless as the unsettled Mojave Desert, and I believe he is absolutely correct.

Recently one of the newspapers in this section printed an editorial which said that the annual use of water in this watershed has for several years exceeded the water resources. Investment in agricultural lands and in the cities that these lands support in the Santa Ana River Basin runs into the hundreds of millions of dollars. That wealth and value must be preserved. The cities of The Metropolitan Water District are confronted with the same situation. To them the seriousness is so impressive that the District is organizing and developing as rapidly as is consistent with good government and administration to bring in more water.

It is useless for me to attempt to tell you people how menacing we consider the situation to be. You are as well supplied with facts as we are. I venture to say that there is not one who would deny that no area can expand beyond its capacity to supply its citizens with water. Water is primary to all forms of life.

In the problem of meeting the water supply situation, all Southern California is a unit. Very properly we can say that this area is in the nature of an empire. When we examine the facts of this area we must come to the conclusion that we are a unit in at least five respects.

First, as to climate. Southern California's growth in the past has been on the basis of climate.

This was the element that first brought us to the attention of the world. It will always be an important factor, probably as great as in the past, and its magnetic effect upon the people of the United States and the world as a desirable place to live will always be effective.

Our second element of unity is based upon our geography. If one but takes a good topographical map and examines this area, he will note that this particular region of which I am now talking is surrounded on three sides by mountain ranges and on the fourth by the Pacific Ocean. The influence of geography upon the unity of peoples is not as great as it was in antiquity as we all know that the great culture of the Greeks can be to a large extent attributed to the isolation afforded them by their country.

We have concrete evidence of the effect geographical barriers have on people in our own State. Governor Pio Pico a great many years ago believed that the difference north and south of Tehachapi was sufficiently great to justify a division of the State and, I am told, even went so far as to introduce a bill into Congress providing for such a division.

The area included in this unified geographical territory which I have outlined exceeds one and one-quarter million acres of land.

The geographical unity of the Southern Coastal Plain has a further influence in the consolidation of this area. I refer to the type of agricultural crops which are uniformly the same throughout the region. Furthermore, through your marketing associations and the fact that much of the shipping is done through the metropolitan railway terminal system and the harbor, the rural district is bound to the industrial and commercial areas in the relationship of producer and marketer.

The next element tending to unify the area is a geologic one. Southern California is very fortunate in having an underground water supply that is marvelously prolific for such an arid region. The entire coastal plain is underlain with interconnected basins from which the very necessary water is drawn for both agricultural and human consumption. Due to the scarcity of the supply as compared with the needs, water rights are carefully guarded. Those in the lower basins keep a very close tab on those above to see that their rights are not infringed upon. This mutual interest in each other's activities has had a unifying influence that is probably very appreciable.

The fourth and probably the most important element tending to unify the area of the coastal plain is that of economics. Industrially, commercially and agriculturally the area is complementary. The rural sections produce what the urban sections consume, manufacture or ship. The effect of one upon the other is mutual. As the urban areas expand, the rural products become more valuable. As the rural products become more valuable, this increase is felt in the urban activities.

For the reasons I have given and probably many other, it is my conviction that the problems of Southern California are unified. Whatever is done should be done for the benefit of the whole, and whatever is done for the benefit of the whole should be shared in by all parts.

To my way of thinking, the proposition of developing a great artificial water supply is a business proposition. Expansion is an element in the economic principles of our time. All large businesses that are important in our national life have adopted a policy of expansion. A part of the annual earnings are returned or plowed into the business to feed its growth.

Here in Southern California we have prospered. We have arrived at the time when, in order to expand further, some of the wealth that we have taken from the soil for manufacturing and industry and all our activities must be supplied to furnish water necessary for further expansion.

We have now grown to the point where we can well afford to consider a water supply that will approach the ultimate necessary for our region. In all probability by the time water is available from the Colorado River the few remaining local resources will all be in service. We must take a broad view of things. We must build beyond the immediate present. Conservation is perfectly proper but it is only a temporary measure.

This is the problem of The Metropolitan Water District, as we understand it. The District is now over a year old. Our organization is proceeding continuously. Every step forward is being taken cautiously and surely. The magnitude of the project requires the best brains that are available.

A great many misconceptions are found to exist regarding the District's purposes and its policies. Recently an editorial from one of your local papers

was called to my attention. It made the statement that the law would have to be amended before any other cities could join The Metropolitan Water District. This is very much in error. The Act as it now stands fully provides for the annexation of cities and districts.

Sometimes we hear it rumored that the District is dominated by the City of Los Angeles. This, again, is not correct. The principle upon which the District is organized is one common to all successful business enterprises. The cities which are members of the District pay for and receive benefits in the same proportion - that is to say that for each unit invested in the enterprise by San Bernardino or Colton or Los Angeles we provide water in the same amount. The water will be all apportioned to the cities in the ratio of their participation. The only certain way for a city to obtain any water from this enterprise is by becoming a member of it. The voting strength of the different cities is apportioned on the same basis, with the exception of Los Angeles. Los Angeles has less than one-fourth of the voting power in proportion to the cost borne, than any of the other members of the District.

I believe the people of Riverside, as of many other cities of Southern California not already members of the District, are interested in this project. If they were not, I would not have been invited to talk to you here tonight. I recently read an editorial in one of your local papers which stated that the argument in favor of joining the District is that, looking to the future, the Colorado River is the one great source of water supply for the cities of Southern California, and that by the time the Boulder Dam and aqueduct are built the growth of Riverside is likely to have reached a point where water from that source will be highly important.

I thank you.

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Secretary Wilbur, I am sure, is determined to push forward Colorado River development work as rapidly and as vigorously as possible.

He believes that a last effort should be made to compose whatever differences exist between Arizona and her Sister States.

Personally, I feel that the national necessity of launching such constructive projects as Boulder Dam and the Colorado River Aqueduct is so great and so pressing at this time as to demand the immediate settlement of all sectional differences.

When these projects are set under way there will be employment for every workman in the Southwest and a demand for materials from every Southwestern State.

The Boulder Canyon Dam project and allied activities embracing in the neighborhood of half a billion dollars in labor, food, supplies, machinery and materials, can be made to be of such tremendous benefit to the Pacific Coast and the whole nation at this time that no person or group of persons should stand in the way of these projects.

The Boulder Canyon project, together with the construction of the Colorado River Aqueduct, will be among the first forward stepping activities for the betterment of the present situation which now concerns all the people of this nation.

These two major projects will immediately start in Southern California a constructive program to house and provide for more than double our present population. To double our present population on the Coastal Plain of Southern California within the next ten years - the houses, building, and commercial activities in Southern California - would mean the employment of more mechanics and laborers than are now available for employment on the Pacific Coast. This development will create such prosperity for the whole Pacific Southwest as California, Arizona, Nevada, and adjacent States, have not heretofore experienced.

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BEFORE THE PRESENT DAY CLUB OF RIVERSIDE

February 24, 1930

As we think deeper into the financial and commercial activities of the Pacific Southwest, we come to to understand more fully how dependant each community is upon the others, how nature has made it an economic unit, how water is the life blood of growth and development and must flow unrestricted through its rivers' underground basins, tunnels and aqueducts, regardless of the artificial boundaries of political subdivisions, of communities, cities, counties and states set up by men.

No subdivision of the whole can attain its greatest degree of growth, wealth and happiness while neighboring communities languish for water.

Recent reports embracing a territory from Santa Monica to Newport, including the three river valleys, Los Angeles, San Gabriel and Santa Ana, show too plainly that we are fast using up the long accumulated water reserves from these interdependent underground basins, the extractions are growing to such an extent that artificial replenishments must soon commence to avert disaster.

We are agreed that an ample dependable supply for this territory must come from the Colorado River.

In the understanding just reached with the Imperial Valley and other agricultural groups along the river, we weel we have cleared the most difficult hurdle in acquiring a right to divert 1,100,000 acre feet of water from the Colorado River to Southern California by the Metropolitan Water District.

The engineering data will soon be in shape for the Board of Consulting Engineers to determine the most feasible route over which to construct the aqueduct to bring Colorado River water here.

We feel the cost of the Colorado River aqueduct will compare favorably, considering population and wealth, to the cost of the Owens River aqueduct; the size, however, will be four times greater.

It is believed a plan can be worked out to make a cheaper price to members of Metropolitan District

where the water can be spread on the land for intevsive comestic and agricultural purposes, thereby restoring the underground reservises similar to what the City of Los Angeles is doing in the San Fernando Valley.

On our way up yesterday from the Imperial Valley, we stopped off at Palm Springs and were amazed to see what wealth a little water is creating there.

We thought there is no community in Southern California that is not adjacent to desert, valley, mountains or ocean, only lacking water to create untold opportunities and wealth.

No community in Southern California that can become a part of The Metropolitan Water District can afford to stay out with such rich opportunities to add to their growth and create additional wealth and prosperity by adding more water to their present supply.

We are grateful for the splendid progress The Metropolitan Water District is making.

These messages brought you here tonight concerning the District, are by men representing the different communities who are giving unselfishly of their time to this cause without pay, Franklin Thomas representing Pasadena, Judge Hutton, Santa Monica, W. O. Harris, San Bernardino.

During the last two weeks Mr. J. G.Bullock, with other unselfish men, has been in conference with representatives of Arizona and the Imperial Valley agricultural groups, which conferences have resulted in a better understanding in Arizona and an agreement with the Imperial Valley Irrigation District, the Coachella Valley County Water District, the Palo Verde Irrigation District, and the Boulder Dam Association, thus enabling us to take the next step forward.

Mr. Charles H. Toll, Senior Vice President of the Security First National Bank, is another dollar-a-year man serving as treasurer of The Metropolitan Water District, aiding us in working out our financial program.

In fact, none of the officers or directors of The Metropolitan Water District of Southern California receive any salary, seeking only to render an unselfish service to their and other communities in finding a mutual solution of this water problem of such great importance to all.

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LOS ANGELES CHAMBER OF COMMERCE

Water and Power Resources Committee

March 6, 1930

Pres: We have with us today Mr. Whitsett of The Metropolitan Water District. I understand that California is getting closer to a solution of its problems. Possibly he can tell us where we stand, where we are heading, how soon certain conditions that we hope for will be consummated.

Mr. Whitsett: Mr. President and gentlemen: I believe that Mr. Wheeler's Committee has a detailed report coming in covering some of these matters so I will omit that phase of our activities and conclusions, and we hear so much about second feet and acre feet and kilowatt hours and the controversies of the engineers and the attorneys on technical and engineering problems that I just wondered if I could not touch on some of the highlights that stand out and which we have to keep our minds on in order to carry on in this forward-looking program. I believe that we are fast coming to the conslusion that we have to have more water here on the Coastal Plain to arrest our receding water tables, not only to predicate additional growth, but to maintain our present growth and financial structure. I believe that we are all coming more and more to the conclusion that with probably 1% of the tributary waters of the state outside of the Colorado River here in Southern California, and possibly half the population, with greater increase than the balance of the state, we have to go to the Colorado River for additional water.

We have recently reached a tentative agreement with the agricultural interests of the Palo Verde, Imperial, and Coachella Valleys. I think in a measure that is going to answer some of the persistent inquiries concerning riparian rights along the river. There may be other interests that we will have to take into consideration and with which we must work out some definite understanding. At this conference with the Imperial Valley and agricultural groups, we agreed that the Metropolitan Water District should have 550,000 acre feet of what they call A water. Then they have B water. We get the first 550,000 acre feet of B water. Now, as we go deeper into it we find that B water is just as wet as A water and possibly a little wetter because it is available when you are a little dryer. I might illustrate that a little with the result in the San Fernando Valley. A water we

use for domestic purposes. B water we spread upon the surface of the land out there and we now find that it doubled the flow of the Los Angeles River and instead of getting 50 second feet down in the galleries we now get 100 second feet. We find that three years ago when we were very thirsty and had used up all of our A water, we pumped from under the San Fernando Valley 13,641,000,000 gallons of water. This was for the cities of Burbank, Glendale and Los Angeles, and this is what kept us from having to advertise to the world that this great city was short of water. We now find up in the Owens Valley that the B water that we could not get a few years ago because the ranchers spread it on the lands to keep it from us, we are now extracting from under the lands and we are pumping 250 second feet of water up there today. That is more than half the capacity of the aqueduct. That was B water, so it is AA water this year.

We have 92 wells pumping and 7 artesian wells up there producing that 250 second feet of water. Now, we know that these upper basin states are not going to use the water that has been allocated to them and if they do use it they will spread it on the surface of the ground as they have done in the Owens Valley and as we have done in the San Fernando Valley, and that will equate the flow and there will be less A water go into the Pacific Ocean and more B water when we are thirsty and need it the most. So we feel that, regardless of legal technicalities, the Metropolitan Water District has a right and cen get a right and will get a right to 1,100,000 acre feet of water and we don't care what they call it, whether it is A water or B water - just so we get it.

Now, take a broad view of the economics of the problem. I have contended all the time that we are going to put that 1500 second feet of water to use on this Coastal Plain by the time we would be able to get it here. Now we are not going to drink it all for domestic water, but I believe that water used on the surface of acreage units up to five acres at least is the most intensive domestic use to which you can put water, because after producing a by-product, furnishing employment to our people, we get a great underground reserve, a third possibly of what we place on the surface. That third is a greater amount than we could hold in our surface reservoirs,if we had them,over a period of years which our cycles of rainfall and drought is spread, because you take five to six feet of evaporation in a year in most of our elevations where we would be forced to carry this water, take that off the surface over the spread of your reservoirs,at the end of several years you have far less water left and it is of a very inferior quality to what you have left in your underground reservoirs after first

having used the water in this intensive domestic use. You get the seepage back where there is no evaporation and that is the water that has made it possible for this Coastal Plain to withstand the droughts which we have gone through, any six months of which would probably dry up the largest rivers we have in this United States if it prevailed over their entire water sheds. Nature has provided us very bountifully with a great underground basin on this Coastal Plain, reaching from Santa Monica to Newport, embracing the three river valleys - Los Angeles, San Gabriel and Santa Ana. That is divided into different basins that flow from one into the other. Since 1916 we have extracted from that reserve, which nature has placed there all down through the ages, 2,645,000 acre feet. At the commencing of that extraction which exceeded the replenishments, you had an artesian belt here on this Coastal Plain of 350 square miles. That has dwindled to less than fifty. In Long Beach where these wells spouted 60 feet in the air, they are now pumping from 50 feet below the surface and the engineers tell us that there will be 2,200,000 acre feet in the next 100 feet of extraction from the present water level below, but with salt water encroachments at El Segundo and other places, we may find an intrusion of salt water after we go below the Pacific Ocean in that part of this great underground basin which is adjacent to the ocean.

Now, in considering this problem, the value of of that underground basin, based on the cost of some of our surface reservoirs which have cost as much as $250 an acre foot for storage and brought all kinds of controversies from people who don't realize that when we live in desert places we must have storage above populous centers will possibly be one million or more dollars, which value you are threatening with destruction by extracting more water than is being put in there by natural and artificial means. Now, with the increase in extraction, with the trend of growth and the possible additional increase, no matter how bountiful the rainfall years may be for us in the future, you will never replenish that underground reserve because your extractions have now reached such a point that the table would continue to recede. Now that brings me to the thought that we must get this 1,100,000 acre feet of water a year as quickly as we can economically find it practical to do to arrest the receding of this underground water table on this Coastal Plain, and when you look at the project with those understandings, it is not so discouraging as some of us are inclined to think at times.

Just to give you a rough idea of the economic possibilities of it - we will say, without getting into the detail of figures, that the aqueduct will cost

$200,000,000, that it will be amortized in 50 years and that we will sell our bonds for 4% - which we will not - and yet it should not be amortized because it will be more valuable at the end of 50 years to the growth than it is to the people who are here now, but that would be $12,000,000 a year - 6% on $200,000,000 would be $12,000,000 a year. The engineers tell us that the price of power, as stated by the Secretary of the Interior will enable us to pump to the highest lifts that we feel we may have to go, including amortization of our machinery and power rate, at about $8.00 an acre foot, that added to the $12,000,000 would be $20.00 an acre foot delivered here on the Coastal Plain in a wholesale way. Now, I believe you could get forward-looking, enterprising organizations that would take and use what water they could get here, if they were permitted to have what it will bring in in wealth to the thirsty lands and orchards of this Coastal Plain - more than $25,000,000 a year - plus $5.00 an acre foot thereto for good measure.

Now then, if some plan could be worked out where we could allow the enhancement of the values, the spread of wealth, and the increase of population to take care of the cost of the aqueduct for a few years, and allow those in the District to use that water at cost of power and amortization of pumping machinery, which would be $8.00 or $10.00 an acre foot, you would stop all the pumps along the outwash of the San Gabriel Valley, through which we will probably come in, and wherever they could connect up with this aqueduct, because it would be cheaper than to pump it where costs, I think, will average much over $20.00 an acre foot, the outside districts paying the full price of amortization and cost of the aqueduct in addition to power and machinery that would force the whole Coastal Plain into the District for economic reasons. The pumps would stop and we would immediately start to use this water, proving our rights to it, restoring our underground reserve, furnishing such employment and such needed production as we would use here because the hot inland valleys have shipped their perishable commodities from the state before we come into production here on the Coastal Plain. It would keep hundreds of millions of dollars circulating in our immediate community. It would permit us to have our employable people with one foot on the little intensive ranch and the other in the factory. We find, as we study into the economics of the cost of living, that great factories are going to move in the future as they said that armies moved in the past - on their bellies. They are going to locate around the lands which produce the full dinner pail at minimum cost. If you go to Pittsburgh, you will find that where they forgot how to feed themselves, their cost of production

has increased so sharply that the big factories are moving to Chicago which is probably the greatest feeding field in America, with its Mississippi Valley and its rich states and the fringe of the Great Lakes dumping its products into the consumption of the workers there, holding down their overhead.

Now, there is no place in the whole country where men can be as happy, where they can live as cheaply as they can here on this Coastal Plain if they have a little plot of ground where they can take care of their home consumption, have a little something to sell and have one of their members occupied in a factory. It does not make any difference what the wage is; the final question is what did you have left at the end of the month? I think if you go into the economics of combining the small, intensive place with the factory, you will find that the difference is sufficient to more than pay the transportation through the Panamal Canal and land your finished product on the Atlantic Seabord, to say nothing of foreign shores.

That is a study in economics, and when you contrast that with the fact that any store in the East into which you go and see the labels of California products on every shelf and on all the cartons in the bins and realize that we are sending them raw materials and they are fabricating it there and shipping us back the finished products. Men, it is a matter of water. That is the determining factor in your growth and development. This is the Mediterranean shore line. It is the Riviera. It is where nature has more than bountifully endowed the ocean, valley, desert and mountain with those things that go to create wealth, prosperity and happiness when the one element of water is added to them. Now, you are going to be just as big and prosperous here if you have the lifeblood of water and use your growth and development, and we must get our eyes on these fundamental things. As the President has said here today, we must keep out of politics anything as sacred to all the people as water is to the people of this Coastal Plain. We must draft the biggest and the most capable men of this city to help shoulder the burdens of this undertaking and we must not be swayed by the immaterial or the technical opinions of attorneys or engineers. We must realize the fundamentals that we have to have the water, that that is the only place we can get it, and that we are going to need it as soon as we can get it here.

Pres: That gives you a pretty clear idea of what we are to face. Mr. Whitsett has voiced the sentiments that I have heard voiced in this room many times. We must keep water out of politics. We must get it here so that

we can grow in every direction. I feel at this time that I would like to ask Mr. Wheeler to give us a general idea as to his committee's activities and to show us how they are tying in with the powers that have this water question in hand.

Dir. Wheeler: Mr. President and Members of the Board: Mr. Whitsett made a report to our committee which he said at the time was confidential, and so we were unable to give the details to this Board. We, therefore, asked Mr. Whitsett if he would be kind enough to come before the Board and tell and tell the Board just what he felt proper to tell. There is one thing I wish he would do at this time and that is, give us a little more in detail the settlement which was arrived at with the Imperial Valley and the agricultural districts. Our committee was unable to report under the conditions imposed upon us. If you feel at liberty to tell the Board at this time I think they would appreciate that.

Mr. Whitsett: Out of the A water that I spoke of, which is the 4,400,000 acre feet that we would get under the six state compact whether we obtain a more advantageous agreement with Arizona or not, now that the agricultural groups have diverted water to an amount that would not permit the Metropolitan Water District to get its allocation of water out of that 4,400,000 acre feet, The Metropolitan Water District has agreed with the Palo Verde, Imperial Valley and Coachella Valley Groups that it should receive out of that water one half of its requirements or 550,000 acre feet. We could possibly have had a little more of that A water, as they term it, but we would have had to take more chance on the B water, but by taking 550,000 acre feet of the A water they agreed that we should have the first additional new water created by the Boulder Canyon project which is termed B water, so we get the first 550,000 acre feet out of B water which gives us our full amount of water. Now then, we all feel that the upper basin states will not put to beneficial use the water that they have agreed should be allocated to them. There is just one thought that is very remote because it is governed by economic usage. We do know that if they spread the water on the ground and do use it as they say they hope to be able to use it in the far distant future of 100 years or more from now, that it will increase and equate the flow of the Colorado River water so there will be more B water than we figure on there being at this time, because a great deal of the B water will go to come down in a flash and probably overtop the dam and go into the ocean, where if it spread on the land it will equate and come down more gradually. Now I do feel that this body and every organization should think into the problem of seeing that none of that water is ever diverted from the

watershed by the upper basin states outside of the agreement with Denver or Colorado for a certain amount. If that water is taken out of the watershed, if they can't put it to beneficial use and they should attempt to sell it and divert it from the watershed then there would not be this surplus of water which we know will come. Now, we would have enough, but after you take water out of the watershed you do not have the return that you get from spreading it on the land. The spreading of it on the land equates and increases the flow in times of greatest need, but if you take it out of the shed, why then we have a different problem.

Dir. Wheeler: Will you tell the Board what agreements have been arrived at with reference to the water after the city has the 550,000 acre feet of A water and the 550,000 acre feet of B water, the surplus if any beyond that, what becomes of that under the terms of the agreement?

Mr. Whitsett: That goes to the agricultural interests and it is understood that the Mexican burden, as they call it, will be shared half by California and half by Arizona.

Dir. Crandall: I understood from your remarks that you have agreed with the people of the Coachella and Imperial Valleys. You haven't entirely settled with the people of the Palo Verde?

Mr. Whitsett: Yes, I mentioned the Palo Verde too.

Dir. Crandall: They are also taken care of. Then who are the other riparian owners of any volume outside of the U. S. Government who, I understand, will give you their rights?

Mr. Whitsett: We don't know what other riparian rights there are.

Dir. Crandall: The U. S. Government has rights to that land.

Mr. Whitsett: Yes. That will come in the contract with the Secretary of the Interior.

Dir. Crandall: Are there many others?

Mr. Whitsett: We don't know of any others. It has been indicated that there are others and there will probably be others spring up. There always are others.

Dir. Crandall: The land on each side of the river was withdrawn from settlement years ago.

Mr. Whitsett: Yes, so we understood. Mr. Koebig keeps intimating that there are other riparian rights. We are just now trying to find out. We were of the impression that there were no additional riparian rights of any considerable consequence and yet we are making an additional search on that point now to determine just what other riparian rights there may be.

Dir. Holloway: Might I ask? I live in the San Fernando Valley in the same town as Mr. Whitsett. I have lived there about the same length of time and realize what has been accomplished by spreading the water in that Valley and its benefits to the whole Coastal Plain. I was just wondering, my understanding is that when this water is brought into this watershed it has been filed on or appropriated exclusively for domestic use. Am I right? You voiced the sentiment that when the water was brought in on this side of the range possibly small farms using it for intensive agricultural use, the return would be very large. I am just wondering if that is possible? Can you use the water to any purpose you wish to use it or would it have to be used with the intention that it was going for underground storage?

Mr. Whitsett: Those are all bridges that we don't need to cross until we get to them. Economics, common sense and beneficial uses determine lots of those problems when we arrive at the point of decision. I have said I believe the most intensive domestic use is spreading it on units of ground up to five acres. I believe there will never be a time in the history of the project that there will be as much water to spill into the Pacific Ocean and as much cheap power to pump it with as there will be at the very inception of the project. Now, I believe that Imperial Valley and Arizona and all these hot inland valleys are coming more and more to realize that we are a part of the same economic unit and that to be prosperous there we must be prosperous here. We must add to our growth and they supply us with their food products at the time of the year when anything we raise here does not come in competition with them because we are more or less earlier in the fall and later in the spring. They have shipped their perishable commodities from the state before we come into production here and we hope to build up such a good feeling and friendly relationship that we won't be influenced by artificial divisions, political subdivisions that have been made by man. Nature made all this Pacific Southwest one economic unit. We are more an integral part of Arizona right here than Californis is North of the Tehachapi. They ship 90% of their cattle here. We sent them

$10,000,000 last year for cattle. One of our financial institutions just recently loaned in the neighborhood of $5,000,000 in one of their counties up there. The same with the Imperial Valley. Go down there now and they are trucking their heavy commodities to us. Their alfalfa, their cotton, all those heavy commodities, are being shipped to us; we can't compete with them and pay $25.00 for our water. We are not in competition - we can't afford to raise those things here. Our land is too valuable. In this intensive subdivision for domestic use, we go through the same steps that I have gone through out in the San Fernando Valley. Families go out there from the East and buy five acres and they think they want a ranch, and then find they have too much to ranch. Then they send for a relative and the first thing you know five families in the same community are living on the same five acres. Then the children start to get married and they start to cut off lots and the first thing you know you have city conditions. You take the San Fernando Valley. We allotted one inch continuous flow to every 7½ acres there store in reservoirs and around the rim of the Valley and in transit to be delivered during our short irrigation season. To distribute that water we put in 618 miles of steel mains on the floor of that Valley, some of them big enough to walk through, and now for all intensive agricultural and domestic purposes that is ample water to take care of our short irrigation periods - but that doesn't have a thing to do with it. That is the exact amount of water required by thirty-five fifty-foot loots on which is built a California bungalow. That is how 7½ acres are divided, and that is the process you go through. You step from the five acre intensive domestic unit and the same amount of water that takes care of the five acre unit takes care of the 25 lots when they are finally built with California bungalows.

Pres: What is the danger of selling water from the watershed to other districts? Would that deplete the water flow from its proper point of distribution in this state and Arizona?

Mr. Whitsett: There is always the temptation of states, when they find they have something they don't need, trying to get money out of it, and I don't know whether there is any territory out of the watershed that would justify the selling and transporting of water. I don't think they have a legal right to do it, but the people can sometimes create a legal right where the temptation exists, and I say that this organization, as well as other forward-looking and thinking organizations, should be on their guard to see that no law is ever enacted to take water from the great Colorado River watershed which embraces some quarter of a million square miles and over 1700 miles of variation and diversification.

Dir. Crandall: You refer to some future danger which might exist for the people of Colorado,for instance, to pierce the Rocky Mountains and put the water on the plains of Kansas.

Mr. Whitsett: Yes. Colorado is taking water out and by agreement, but no other agreement should be entered into permitting those upper basin states that are going to find that they have exacted in this compace more water than they can put to beneficial use, to transport it out of the district to the plains of Kansas or any other place. I think the laws of economics will prevent that for many years to come, but the time might come when it would be practical to do that, and in that event we want to have established our claim by putting our water to use at the earliest possible opportunity and taking whatever steps are necessary to prevent that act.

Pres: The meeting is open for questions if anyone has anything to ask Mr. Whitsett.

Dir. Schleicher: I would like to ask a question. With regard to this coastal plain which runs from the Pacific Ocean up to the foothills of Pasadena being now so depleted that, regardless of bountiful rainfall which might come over a period of years, it could never be replenished. On what theory was that conclusion based?

Mr. Whitsett: Based on Mr. Conklin's recent report which states that we are now extracting 216 second feet more water out of this underground coastal basin than is being put in there by natural and artificial means, that by 1940 we will have taken out 681 second feet; by 1945, 885 second feet a day; by 1950, 1,070. That is based on the trend of growth and the trend of extraction in access to what the replenishments are by nature and artificial means.

Pres: Assuming the Colorado River is brought in here, then would replenishments in the natural way, because of the water coming in from another district and furnishing our needs, take place?

Mr. Whitsett: Yes.

Dir. Wheeler: The question asked by Mr. Holloway was the vital question that particularly interested the agricultural group at the meeting I attended yesterday, simply as a listener, at the California Fruit Growers Exchange. The outlying districts in The Metropolitan Water District are particularly interested in that one question. Professor Franklin Thomas of The Metropolitan Water District Board addressed the gathering and in response

to that question gave it as his opinion that, citing the case of El Segundo where the salt water is now seeping in and where they have requested the city authorities to allow them to treat a certain amount of sewage from the city of Los Angeles to get that water to replenish their water level, The Metropolitan Water District should take the whole of its 1,100,000 acre feet from the start. That they should sell to these outlying cities in The Metropolitan Water District water so that they could replenish their supply, refrain from pumping from the inception of the project so as not to lower their water levels, but so that the third that Mr. Whitsett speaks of as seepage should seep in and thereby raise the water levels and replenish that storage reservoir so that from the time the water is available, The Metropolitan Water District should take all the water to which it is entitled.

Dir, Holloway: On the basis of $20.00 an acre foot, what is the relative cost per 100 feet?

Mr. Gram: 4.16 cents.

Mr. Whitsett: I might say in that connection that this cost does not affect the domestic rate or that it affects it so little that it is almost impreceptible because the cost of distributing the water is the principal cost after it gets here. The cost of distribution is just the same whether the water costs you $10.00 an acre foot or $20.00 an acre foot, and I would like to say that this is not the time to discuss the uses of this water for agricultural purposes. That will come about naturally at the proper time and in the proper way. It is an antagonistic matter to some of the agricultural groups. They get the wrong impression of it and they place the wrong construction on it.

When we recently went to Arizona to confer with some of the leading men down there, we said, "Now, why are you against this project?" They said, "Why, you are getting your water for 25¢; ours cost us $2.00 and something here in the Salt River Valley." "Well," I said, "I know that, but the Government won't build us any aqueduct. We have to do that with our own money and that is going to add $12.00 or $15.00, and then pumping is going to add another $8.00 or $10.00, and it will cost us $20.00 or $25.00 per acre foot." They said, "We didn't know that."

We understand it that way and they fought it from the standpoint of its being competitive from an agricultural standpoint. Now, these small units increase the population that they sell their beef and other products to, and when they realize that and see how their markets grow, that antagonism will die out because it is

a benefit to them to have us grow here in that way, and that is the only way we can grow.

Pres: You feel you are getting a lot closer to Arizona than the papers would indicate two or three weeks ago?

Mr. Whitsett: I don't think there is much difference between Arizona and California on their water division. I think the main difference is from the standpoint of revenue. Now, in Arizona, their molders of thought and action down there - Mr. Hefner and I went down and talked to them separately - said, "We don't want to place one straw in the way of The Metropolitan Water District." We told them that economically we could not carry the load if they insisted on certain things. They said, "We don't want to break your back economically. We want you to grow and develop and we want to supply you with our products." That is the thought all along the line, that all these different places want to be helpful to The Metropolitan Water District and we are trying to encourage that cooperation and that understanding and I think we are making some substantial progress along those lines.

Pres: We have heard a lot of good news today and feel that something constructive is being done at this time. I want to thank Mr. Whitsett for coming here and giving us such a broad outline of the thing we want to know about. If Mr. Whitsett has any other business now, we wish him goodbye and will go on with the regular order of our business, but if you would like to sit in with us, you are quite welcome.

Mr. Whitsett leaves.

THE METROPOLITAN WATER DISTRICT FROM ITS OWN POINT OF VIEW

MEN'S CLUB - BEVERLY HILLS

March 27, 1930

Mr. Chairman and Fellow-Guests:

I am here this evening at the invitation of Mayor Kimlin of Glendale. He has requested that I talk to you on the subject of The Metropolitan Water District as a phase of the Colorado River development.

The Metropolitan Water District, as you probably all know, is engaged in the problem of bringing an abundant supply of wholesome water to Southern California. This problem is the most important one south of the Tehachapi mountains. Every one here tonight, it can be safely assumed, is also concerned with, or interested in, the question of water.

In the letter of invitation that I received from Mayor Kimlin, he stated that this meeting would be composed of city officials. The problem of cith administration in this part of our state would be much more simple and pleasant if the problems of water supply were eliminated from among their troubles. Mayor Kimlin is to be commended on bringing such an important group as this together for the discussion of this vital problem.

The Metropolitan Water District of Southern California is organized under an Act of the State Legislature passed in 1927. In that Act the purposes of a district incorporating under its provisions are stated as the developing, storing and distributing of water for domestic purposes. No mention is made of the source from which the water is to be obtained. However, our engineering studies have determined that the Colorado River is the only supply of sufficient quantity that can be economically developed and distributed to Southern California.

The District is therefore making plans for bringing Colorado River water into Southern California. At the same time as the aqueduct is being built, the great Boulder Dam will be under construction by the United States Government. At the Dam will be built mighty power houses from which transmission lines will extend hundreds of miles. Imperial Valley will probably be busy with the great All-American Canal. All of these activities, involving the expenditure of hundreds of millions of dollars, represent what we may call the Colorado River development. These

activities are based on economic principles. By that I mean that the money expended will be in the nature of investment and that the cost will eventually be returned.

The feasibility of the entire project is based on the water, whether it be designated as "Improvement of Navigation","Flood Control", "Irrigation", "Power Generation", or "Water Supply for Southern California." In a certain sense, the last of these is by far the most important. The market for the power, the sale of which is intended to repay the cost of the Dam and other elements, is based on industries and people who will come to the Pacific Southwest in the next ten or twenty years. However, industries and people cannot come to this region unless water is provided for them. In addition, the acres that will be cultivated in Imperial Valley, and the varied industries that will spring up in Arizona and Nevada, will be to a very large extent determined by the market which the growth of the Coastal Plain will create. Therefore, I feel safe in saying that the water supply which the District will bring to Southern California is the most important part of the entire Colorado River development. This is the part which The Metropolitan Water District has to perform.

The District is now on the second year of its existence. Many of you are familiar with it and understand its nature. There are, however, a great many who have only a hazy notion of what the District is. We learn about this from the many inquiries that are received.

In attempting to explain or define The Metropolitan Water District we can do so in several different ways. For instance, it may be defined as a political subdivision of the State of California. This is correct as far as it goes because it was created under an Act of the Legislature and is incorporated with the Secretary of the State.

From another angle, the District may be defined as a union of the eleven cities of Southern California which compose it, for the purpose of bringing an adequate supply of water to Southern California. In this sense the District may be regarded as a corporation composed of approximately a million and three-quarter stockholders joined in an enterprise of bringing to this Coastal Plain sufficient water for present demands and future growth.

There is another definition which, in my estimation, is more expressive of its true nature. We conceive of the District as an organization with invisible branches extending to every part of Southern California. To tie into the organization, a municipality simply joins

on to its particular branch. In this way we see that cities, while being joined together to form The Metropolitan Water District, retain their individual identity. That is to say, the flow of authority is from the city to the District. In this conception it is essential to realize that whatever power the District may have comes from the cities which compose it. The Director who sits at our Board table is a physical representation of the branch from his particular city. He brings the ideas of his community to the Board, where they can be constructively put to use. You will note that such a conception of the District makes it perfectly extensible. It can function with branches connected to only a few cities or it may extend branches to a great number. The greater the number of cities belonging to the District, the more completely will the interests of all Southern California be represented. The control by any one city is reduced to a minimum by allowing no city to have a majority of the votes regardless of how much it contributes to the cost of the project.

Many people seem to think that the District is something original or new. Actually, the idea is as old as man himself. Ever since men have lived in separate groups, districts have been in operation. In ancient times, wars were carried on, canals built, temples constructed, under this form of organization. In the United States we find an examply shortly after the settlement of the New England States by the Puritans. The cities in the Connecticut Valley, being isolated from the Eastern Seabord colonies, set up a mutual organization for the purpose of maintaining an army against the Indians and for other purposes. Since then, numerous projects have been successfully undertaken by communities joined into Metropolitan districts. So great has been their success that the number is increasing at a faster rate each year.

The City of Boston and the forty-eight communities surrounding it have three separate Metropolitan districts over the same area - one for sewage, another for water, and third for park districts. In New York we have The Metropolitan District of New York, including within its limits seven million nine hundred thousand people. All of you have no doubt heard of the Chicago Sanitary District. The East Bay Municipal Utility District, in our own state, has just completed its great problem of bringing a water supply into Oakland from the north. In fact, there are Metropolitan districts associated with practically every large center of population throughout the United States.

Diverse as these districts are, their fundamental underlying principles are the same. The first underlying principle is that the area to be included within

the District must be a unit in one or more of the following respects: geographical, geological, climatic and economic.

Southern California, as you will note, involves practically all of these elements. Geographically, the area is a unit, lying as it does between the rim of high mountains and the Pacific Ocean. We are hemmed in between a desert and salt sea water.

The most fundamental of these, however, is the fact that the area is an economic unit. By that I mean that its industries, manufacturers, and agriculture are interlaced to form one system. What affects one part influences all the rest. If agriculture suffers a severe season with a loss of crops, it is immediately reflected in the prosperity of the cities. Many of you will recall what happened to the cities in 1913, when the citrus crop failed. Likewise, if the number of tourists falls off or manufacturing is reduced, the effect is felt in the farm centers.

The second fundamental principle underlying the Metropolitan district is that the area of which it is composed must have a common plan which it desires to execute or a problem of difficulty which must be overcome. As an illustration of a district organized with a great plan in mind, we have the Port Authority of New York, which was created for the purpose of unifying all the facilities of New York Harbor. The Metropolitan Water District is an example of a district founded to overcome a difficulty. That difficulty is, at present, water shortage in Southern California which each year becomes alarmingly more severe. At present there are eleven cities in the District, extending from San Bernardino in the east, to Santa Ana in the south, to Santa Monica in the west, and to Burbank in the north. From the fact that the cities represent portions of three counties and are so widely spread, we know that the demand for more water exists everywhere in this region.

The third requirement or underlying principle in the formation of a Metropolitan district is that the benefits which will accrue to it must be equitably distributed throughout the member cities in proportion to the amount they contribute to the enterprise. In other words, the district cannot be successful if one community pays all the bills and another takes all the benefits.

The fourth and last principle which I am going to state is that the plan must be financially feasible. That is to say, the investment required must be within the capacity of the benefitted area to pay. Frequently where cities

have joined to form a district, the project undertaken was so large as to have been financially impossible for any one of them to have handled alone. It is generally believed, in the case of The Metropolitan Water District, that the City of Los Angeles could have handled the project alone. The reason for the District, as it is now established, was based on economic rather than financial considerations. A broad business-like view was taken by the cities of Southern California with the knowledge that the entire Coastal Plain is an economic unit. If we are to grow to the extent of our possibilities, we must think of the region as a whole regardless of how many individual cities are in it. No city here can prosper or go backward without influencing its neighbors in the same direction. Our leading people realize this important principle more as we continue to expand and grow.

If the foregoing principles are held in mind it is believed that a better understanding of the District will exist. Our problem is a gigantic one and its accomplishment will be a matter of great pride and benefit to Southern California in years to come.

It will probably be ten years before the water begins to pour into the cities of The Metropolitan Water District from the Colorado River. From all present indications, the cities will be very anxiously waiting for it when it arrives. Each city of the District will be entitled to an amount of water that is proportionate to the money invested in the project. The investment will be made from two sources. First, the District can levy on its member cities a tax of not to exceed five cents on the hundred dollars of assessed valuation for purpose other than interest and amortization of bonds. During the past year a tax of four cents was levied for District purposes. The second source of funds is the issuing of bonds, which must be approved by the voters in the District. In return for the cost of the project, the cities will receive perpetual right to an amount of water in proportion to their investment in the project.

When the water begins to flow, the problems of construction will be finished. Then the new problems of operation will begin. In the operation of a project of this kind, the best principles of business and economics must be observed. It will be carried on, just as a great corporation should be, in a financially solvent manner. When the aqueduct begins to discharge its precious into Southern California, the District will become self-supporting and beyond all doubt a profitable investment to the cities in it. Not only will revenues accrue to the District, but the cost of the water to the individual member cities will be written off against their increased growth.

It is not essential to the success of the District that any more cities be included than are at the present time. However, as I have stated before, we are all an economic unit and should participate in this enterprise as a unit. When the project is completed, cities that have not joined the District will find themselves at a very serious disadvantage. The cities that have water will grow and industries will be attracted to them. There will be no free and unrestricted replenishment of the underground basins as some seem to think. All the water of Southern California will be needed in addition to that which will come from the Colorado River. The fifteen hundred second feet which the District will bring in will be put to use immediately by its member cities for domestic and suburban uses.

The need for water at the present time is known to every one who has to deal with in any intelligent way in Southern California. There are some who are not convinced, but you will find them largely among the people not very intimate with the problem. Not only does a shortage exist now, but every year it becomes greater. Everywhere throughout Southern California as we travel about we hear of wells deopping from two feet to fifteen feet and more a year. In the past year, many have gone completely dry. Out near the Coast, cities and industries are becoming more and more concerned as the salt water shows up further and further inland. Here and there we hear cities and industries talking of reclaiming sewage water and looking to other temporary supplies. Reports, seemingly by the hundreds, have been written on the subject, all of them practically in agreement as to the condition which now exists.

A short time ago, the State Engineer made a report, showing that the present overdraft on the underground basins was appalling. By overdraft, in this case, I mean the amount that was used in excess of the replenishment, even had the rainfall been normal, which it was not. There are conservation associations and water spreading associations, and endless law suits over a few miner's inches.

At the present time, Los Angeles is preparing to vote bonds to increase the capacity of its aqueduct. Pasadena is building to obtain water from the San Gabriel River. Long Beach is looking for an increased supply. With all this activity for more water, it is a wonder to me how people can question the necessity of bringing in a large supply from an outside source.

This is the situation we find at the present time. Where is the water to take care of the great growth we have

every reason to expect in the next ten years and from then on? It must come from the Colorado River.

I have tried to give you an idea of the true nature of The Metropolitan Water District of Southern California as one of the Colorado River development projects. Also, to point out the underlying principles on which it is created and how they are related to the Coastal Plain of Southern California.

I have attempted to show in a broad and general way the economic and other advantages the cities in the District will have over the cities out of the District. In doing so your attention was called to the situation in Southern California as the members of the District see it.

It is not my intention to induce any cities to come into the District, but merely to point out that its consideration deserves your most careful analysis. Whether other cities come into the District or not, the project will be carried out and completed. When the water has reached Southern California it will be distributed in a profitable manner according to the best principles of business.

I believe that in years to come, Southern California will be extremely grateful for what the District is doing now. The water supply which we will bring here is from the last adequate resource economically available to Southern California. Cities will be much better off if they participate in the project from the beginning and have a part in its organization and directing.

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MEETING OF THE LOS ANGELES ROTARY CLUB

Biltmore Hotel

April 23, 1930 - noon

Mr. Chairman and Members of the Los Angeles Rotary Club:

I am here today at the invitation of Mr. John G. Bullock, fellow member on the directing board of The Metropolitan Water District of Southern California.

They say a man is just as old as his arteries. I say a city on a desert has ceased to grow and is starting to decay when its aqueducts fail to carry to it an ever-increasing, unfailing supply of water - its lifeblood of growth and wealth.

The Los Angeles region has been shown on our business maps as a white spot for so many years, that we have come to call it the one constant white spot of America.

Had it not been for the far-sighted vision and common sense of our city's pioneers, who assured us our present supply of water, our financial spot would not have been so outstandingly white. And what has been good in the past holds good for the future. The whole economic structure of Los Angeles is dependent upon an adequate water supply.

In his recent article, John McGroarty warns us that the Four Horsemen of the Desert - drought, flood, fire and wind - have ridden every desert civilization into decay down through the ages. Babylon, a greater city in population than New York, Chicago and London, went its way, principally for lack of its principal defense against the desert - water.

Water is the lifeblood of every living and growing thing in the vegetable and animal kingdoms. It has truly been said that a town or city cannot grow beyond the capacity of its water supply. If that capacity is permanently fixed, there might as well be a stone wall erected about the town to prevent its further expansion.

Since Los Angeles attained a population of 200,000 people, there has fortunately been no drought comparable in severity to those of 1791, 1809, 1828, 1845, 1858, 1863, 1877 or 1900. During some of these years there was not even a trace of rain. Thousands and thousands of head of stock perished for lack of water.

Hope and faith are mighty factors in the growth of a metropolis. But in a desert such as ours, surely the

person is unfamiliar with the facts and records who bases his hopes on the replenishment of our alarmingly receding water tables by the rain of more bountiful rainfall years.

Our average rainfals are desert rainfalls. Our average demands are those of a civilization transplanted from regions where rain and snow are a burden rather than a scarcity. Here in the Los Angeles region, we are more apt to get a repetition of history, which means a return of greater droughts than we have experienced in the past thirty years.

We must increase and diversify our dependable supply of water in order to make secure our present growth and future increase, thereby making possible to this nation its richest heritage, for nowhere has nature so lavishly combined the best there is in ocean, valleys, deserts and mountains for the happiness of those who are fortunate enough to live in California.

The drought of 1900 awakened Los Angeles. It realized its possible place in the sun. It recognized that its supply from the Los Angeles river and a few wells was insufficient for a city doubling in population every decade.

So it added to its local supply, most of that of Owens Valley. This gave it a double-headed supply for at least a few years. Looking still further ahead to still greater populations, Los Angeles has joined with its sister cities for another double-headed supply from the Colorado River.

The need for water at the present time is known to everyone who has to deal with it in any intelligent way in Southern California. There are some who are not convinced, but you will find them largely among the people not very intimate with the problem. Not only does a shortage exist now, but every year it becomes greater.

Everywhere throughout Southern California as we travel about we hear of wells dropping from two feet to fifteen feet and more a year. In the past year, many have gone completely dry. Out near the coast, cities and industries are becoming more and more concerned as the salt water show up further and further inland. Here and there we hear cities and industries talking of reclaiming sewage water, and looking to other temporary supplies. Reports, seemingly by the hundreds, have been written on the subject, all of them practically in agreement as to the condition which now exists.

A short time ago, the State Engineer made a report, showing that the present overdraft on the underground basins was appalling. By overdraft, in this case, I mean the amount that was used in excess of the replenishment, even had the rainfall been normal, which it was not. There are conservation associations and water spreading associations, and endless law suits over a few miner's inches.

No community can permit, without jeopardizing its health and economic welfare, the approach to exhausion of its customary water supplies. Even a serious shortage for one summer in this highly developed region would cause a loss and depreciation of values which would go far toward meeting the cost of bringing in from distant sources the quantity of water needed to satisfy increasing requirements.

The water problem of any city naturally divides itself into a question of supply and distribution. Los Angeles with its supply hundreds of miles away; with the attending problem of storage; with its districution system 441 square miles of territory ranging from sea level to 1400 feet above sea level, faces the most difficult problems of both supply and distribution. And the proposed water bond issue to be voted on May 20th is designed to solve these difficulties.

I have stated that the Colorado River is the only place from which the cities of Southern California can get a supply of water sufficient to permanently eliminate the danger of shortage, but there are other smaller sources of water that can and must be developed to tide over until the waters of the Colorado come pouring into the thirsty cities.

Such a supply is found in the Mono Basin which lies just beyond the present source in Owens Valley. The water in this basin, supplemented by water from additional land in the Owens Valley has been estimated by engineers as being sufficient to satisfy the demands of the city until the water of the Colorado arrives. This calls for an expenditure of about $17,000,000.

Long and continued negotiations with the ranchers and merchants in the valleys resulted in the complete and harmonious agreement on the prices to be paid, and will end forever disagreements and quarreling that have resulted in the past. Furthermore, the purchase of town properties will put the city in complete control of the sanitation of the waters - the importance of which cannot be overestimated.

The next important item calls for an expenditure of $10,000,000 for water development expense, including diversion from the Mono Basin and added necessary facilities for pumping in the Owens Valley. This will increase the city's supply approximately 30 per cent.

Acquisition of water is but part of the problem - it is essential that there be adequate storage facilities near the city. Disinterested engineers have agreed that even for the present supply the city's storage facilities are entirely inadequate and with the increased amount of water coming down the aqueduct it will be essential that additional storage capacity must be created. For this item is allowed an expenditure of $7,500,000.

To care for the increased number of new consumers it is necessary to lay miles of new mains. To render adequate service in the older parts of the city it is necessary that old mains be replaced. Not until this is done will the full purpose of the project be completed. The last item of the bond issue calls for $3,219,000 to be expended on new distribution facilities.

The Municipal Department of Water and Power by its very organization and purpose is self-sustaining; it does not depend on money from taxes. It is perhaps untunate that the means the Department must use to acquire capital should be designated as a bond issue, when it differs so radically from the bonds of the governmental departments, such as fire, police, school, etc.

When a private corporation desires additional capital to take care of its expansion, it needs only to obtain permission from the Railroad Commission. The Department, when it desires to borrow capital, which it repays entirely by its own revenue, must obtain a two-thirds vote of the citizens. So in reality when a bond issue is submitted to the vote of the people, the Department is asking you as the owners of this project to give it permission to borrow capital which will be entirely repaid by its own revenues.

I referred previously to our wonderful heritage here on the Mediterranean shore line - the Riviera, the playground of America.

This national heritage forms a magnet to draw those bold in thought and rich in experience and ability to our communities. With their knowledge and acquired thirst for achievement they eagerly accept the challenge

to supply the one lacking element - water, to make this the most ideal place to live in all the world. Never has there existed an opportunity to build so great an empire in so short a time where all the determining factors are so abundantly present, except water.

I am sure we will eagerly accept the challenge and vote the bonds.

Then to the great task of the Colorado River aqueduct. It will be built not only by Los Angeles, but at least ten other cities in Southern California, as far apart as San Bernardino, Burbank, Sant Ana and Santa Monica, and representing portions of three counties.

The Metropolitan Water District was founded to overcome our alarming water shortage. With its purpose accomplished new insurance will be added to our stupendous increase in wealth by diversifying it four times. The Colorado River's unfailing watershed of over 250,000 square miles will be tapped.

The Southwest has enjoyed recurring cycles of agricultural and industrial activity. During such times we have not only had to tap outside sources of capital, but labor as well. The building of Boulder Dam and the Colorado River aqueduct will take up business slack, not only locally but also in the several adjoining states.

At the same time as the aqueduct is being built, the great Boulder Dam will be under construction by the United States Government. At the dam will be built mighty power houses from which transmission lines will extend hundreds of miles. Imperial Valley will probably be busy with the great All-American Canal. All of these activities, involving the expenditure of hundreds of millions of dollars, represent what we may call the Colorado River development. These activities are based on economic principles. By that I mean that the money expended will be in the nature of investment and that the cost will eventually be returned.

The feasibility of the entire project is based on the water, whether it be designated as "Improvement of Navigation," or "Water Supply for Southern California."

In a certain sense, the last of these is by far the most important. The market for the power, the sale of which is intended to repay the cost of the dam and other elements, is based on industries and people who will come to the Pacific Southwest in the next ten or

twenty years. However, industries and people cannot come to this region unless water is provided for them. In addition, the acres that will be cultivated in Imperial Valley, and the varied industries that will spring up in Arizona and Nevada, will be to a very large extent determined by the Market which the growth of the Coastal Plain will create. Therefore, I feel safe in saying that the water supply which the district will bring to Southern California is the most important part of the entire Colorado River development. This is the part which the Metropolitan Water District has to perform.

The southwest is an economic unit. By that I mean that its industries, manufactures and agriculture are interlaced to form one system. What affects one part influences all the rest. If agriculture suffers a sever season with a loss of crops, it is immediately reflected in the prosperity of the cities. Many of you will recall what happened to the cities, in 1913, when the citrus crop failed. Likewise, if the number of tourists falls off or manufacturing is reduced, the effect is felt in the farm centers.

It will be ten or more years before the water begins to pour into the cities of The Metropolitan Water District from the Colorado River. From all present indications, the cities will be anxiously waiting for it when it arrives. Until then,the various communities must do the best they can to bridge over the intervening years exactly as Los Angeles proposes in the bond issue which I feel sure you will give your support to on May 20th.

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THE METROPOLITAN WATER DISTRICT

AND THE GROWTH OF SOUTHERN CALIFORNIA

April 24, 1930

Water has caused two problems in Southern California and started two great projects. The first problem deals with too much water, the second with not enough. One relates to Imperial Valley and the other to the Metropolitan area of the Pacific Coastal Plain. Imperial Valley, since it was first developed and inhabited, has fearfully watched the Colorado River which gave it birth and continues to exist as a menace of destruction by flood. Out of the constant threat of destruction grew the plan for Boulder Dam and the many problems of water rights and state agreements.

The Metropolitan area of the Pacific Coastal Plain, the location of the second problem, has been grandly endowed by nature. Its beauty, climate and fertility have created a marvelous growth of many fine cities. The only limitation imposed by nature is that of water supply. A vision of drouth and depleted underground water reserves destroying great financial values is the problem which produced The Metropolitan Water District. Southern California looks to The Metropolitan Water District to bring it an abundant and adequate supply of water.

Though the necessities for the Boulder Dam project and the Colorado River aqueduct have originated in different areas, and for diametrically opposite reasons, they are inseparably joined. The Colorado River is the source to which the aqueduct must be built, and the Boulder Dam and the power to be generated by its falling waters are adjuncts to its plan.

The preliminary surveys for the Colorado River aqueduct began in 1925 with the proceeds of a $2,000,000 bond issue approved by the people of the City of Los Angeles. In 1927 an enabling act was passed by the California State Legislature which made possible the formation of The Metropolitan District the year following.

The District, composed of the Cities of Anaheim, Beverly Hills, Burbank, Colton, Glendale, Los Angeles, Pasadena, San Bernardino, San Marino, Santa Ana and Santa Monica, is gradually assuming the work and activities started by the City of Los Angeles. Both projects are gaining momentum rapidly, spurred on chiefly by the need for them. Before the summer is over work on the Boulder Dam will probably have begun. The Metropolitan Water District is rapidly and with great care maturing its plans. With the starting of two such great projects at our doors, it is natural to contemplate what their effect will be on the economic life of Southern California.

Real estate values are basic to the economic structure of any region. Any instability of industry due to lack of water or for any other reason is reflected in decreased property values. Conversely, anything that stabilizes industry and permits its growth and expansion will increase real values. Southern California, a semi-desert region, has never had a large sense of security from water shortage. History reveals periodic drouths with fearful consequences. The Colorado River supply will make the region independent of existing water resources, and will encourage industrial investment and expansion. With an abundant supply of relatively cheap water, industries using large quantities of water, such as chemical, dying and packing plants, will be induced to Southern California because of its advantages of climate, labor supply and shipping facilities.

The natural result of industrial growth is population increase. This means a demand for more homes, which is attended by a multitude of other demands. The combination of an adequate water supply with the natural advantages of Southern California create an economic chain of cause and effect leading logically to the ultimate development of the region.

Parallel to and closely related to industrial growth will come renewed possibilities in the rural regions. The water from the Colorado River will permit agricultural expansion and intensification. Not only will the amount of farm produce increase, but the industrial expansion will augment the profitable local market.

The prosperity inevitable to such vast expenditures of money and the development which will naturally follow will be of more than local significance. In it will participate the entire Southwest including Arizona and Nevada, who will find an increased outlet for their range and agricultural products and a new market for their mineral and chemical raw materials.

In a more immediate sense than that of the growth and expansion of Southern California will be the prosperity created by the expenditure of large amounts of money for the construction of Boulder Dam and the Colorado River aqueduct. The amount of money put into circulation will be enormous, due to the local purchasing of materials, supplies and equipment. The demand for labor will absorb the local market and draw from the entire country a supply that is now anxious to come. And all of this activity in labor and materials must be inevitably reflected in the demands for housing and real estate. Not only will land values be stimulated but they will also become permanently stabilized.

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S T A T E M E N T

May 20, 1930

No building is stronger than its foundation. An ancient tower in Italy may be renowned because it leans a number of degrees from the vertical and still does not fall, but it is hardly the sort of building in which we would want to live. It is likewise in a community. No city is better than its economic foundation. There are many examples in the United States and in Europe of "rotten boroughs" - cities which once flourished but perished because their economic foundations crumbled. We find such cities depopulated and their buildings standing vacant, as testimony that a vein of ore was exhausted, of oil wells that ceased to yield, of timber growths that were cut down.

Equally fundamental to the continued growth and prosperity of any region is the water supply which it has available for domestic, industrial and agricultural uses. In a desert region of scant rainfall and few rivers, water supply is more fundamental than any other economic factor.

The southern coastal plain of California has had a water supply problem ever since the white man took possession. It has grown and prospered because its natural advantages of climate, soil fertility, and geographic location have justified bringing water from the mountains 275 miles away. To prevent the possibility of any yielding in the security of the economic foundation, eleven of the major cities of Southern California united in The Metropolitan Water District to bring in an abundant and adequate supply from the Colorado River.

The question is asked "What will The Metropolitan Water District do for Southern California?" It will bring in 1500 second feet of water which, in a year, is sufficient to cover 1,100,000 acres one foot deep. That amount of water will make possible within the area of the coastal plain seven and one-half million more people than now live there. Just as Los Angeles doubled its population in the ten years following the coming of water from the Owens Valley, so will the area within The Metropolitan District double its population in the ten years following the coming of water from the Colorado River. The economic circumstances in each case are practically identical. Think what this means in terms of growth and wealth. It will mean the doubling of the amount of business transacted; doubling of the demand for labor and material; real estate will prosper with the increased values. Banking, shipping, transportation, agriculture, will be stirred to unprecedented activity.

More important than these, will be the fact that our great and splendid development here will be on a firm foundation and the expansion and growth can take place

with confidence and security. In addition to water which will be available from the Colorado River for the use in urban areas by people and industries, there will be made possible a suburban development. On the coastal plain of Southern California there are 500,000 acres now only partly developed which will rapidly take on a suburban character. Such land can bloom and flourish on two acre feet of water per acer a year, the same amount per acre that is used by cities of Southern California. From the time the Colorado River water first becomes available for use it will produce an income sufficient to make the project self-supporting.

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Metropolitan
SUCCESS BOND
BRIEF CONTENT
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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BEFORE THE COLTON CHAMBER OF COMMERCE

July 9, 1930

Ladies and Gentlemen:

I feel highly complimented in appearing before you tonight. About two months ago Mr. Hutchinson, your Director on the Board of The Metropolitan Water District, asked if I would talk at the Annual Banquet of the Colton Chamber of Commerce and I said that I would. The date of May 20th was suggested by Mr. Robinson, President of your Chamber of Commerce, and finally decided upon.

However, I was called to Washington in regard to the changes in the District's contracts with the United States Government which it seemed would be necessary in order to get the appropriation through Congress this session. At the time of leaving I felt sure that I would be back before May 20th, and in fact had made arrangements to take a business trip to Alaska the first part of June.

When it became evident that I would not be back in time to keep my engagement with Mr. Robinson, I sent instructions by wire to my office to make arrangements for a substitute speaker. I was fully confident that this would be done, knowing that there are a number of the members on our Board who are as well qualified as I am to speak on the subject of The Metropolitan Water District. To my surprise I was informed that the meeting had been postponed until my return. It is for this reason that I say I feel complimented in coming before you tonight.

Your banquet comes at an opportune time. It is very fitting that Southern California should celebrate the beginning of the Boulder Canyon Project as it has never celebrated any event since California was admitted to the Union as a State. I am confident that the passing by Congress of the Second Deficiency Bill on July third will become one of Southern California's historic days.

How much this event means to the people of The Metropolitan Area cannot be estimated at this time. The measure of the value must be expressed in terms of security, growth, economic expansion, and stability. Most of these elements represent intangible values which will, however, be very real to those who will participate in the benefits which the Colorado River water will bring to the Metropolitan Area of Southern California.

It may be interesting to you to know a little of the situation which we found at Washington in regard to the Second Deficiency Bill containing the initial appropriation for the Boulder Canyon Dam. The general attitude of those who were working on the Bill was that the

Boulder Canyon Project Act having passed Congress, the whole matter of the appropriation depended upon whether or not the various contracts were adequate to repay to the Government the cost of the project as required in the Act.

In the course of the Committee hearings, it was my privilege and misfortune to be placed on the grill. I took advantage of the occasion to read into the hearings a statement in reply to the arguments of the opposition, of the growth of Southern California, and quoted the majorities by which various water issues have been approved by the people, with, I believe, excellent effect. Mr. Cramton, Chairman of the Subcommittee, wanted to know if Southern California meant business in regard to this Colorado River Aqueduct, and whether we intended to push the work forward. I told him that Southern California has always carried its obligations 100% and would be behind this project to its full capacity, and that the need for water was so great that the bonds would be voted on the first possible occasion after the Boulder Dam was under way.

This volume contains the hearings before the Subcommittee of the House Appropriation Committee on the Second Deficiency Bill, 200 pages of which are on the Boulder Dam item alone. The amount of talk set down here indicated how hard the opposition fought to defeat the Bill. I believe you will be interested in a part of this statement which I read into the Hearings.

(READ)

The attitude of the opposition in regard to the Boulder Dam reminds me of an incident that happened back in Indiana when I was a young man engaged in the coal business there. John R. Walch built a coal road down near Bloomington opening up a section of Indiana where some of the old settlers had lived their lives without ever seeing a train. When the road was completed a fine Pullman train was arranged to make the first run carrying the inspection party, coal operators, patrons and friends of the enterprise.

The Hoosiers turned out at every station. At the larger towns the bands played. There was speechifying and a general celebration all along the line.

Near Bloomington a typical Hoosier with linen duster and chin whiskers arrived when the party was about over. He crowded in as close as he could get and stood in excited wonderment gazing at his first train. Some one reached over and tapped him on the shoulder and said, "Uncle Jerry, what do you think of her?"

"B-- b-- b-- by Gosh, they'll never start her," he stammered.

About that time the conductor hollered All Aboard. The engineer rang the bell, opened the throttle and the train started forward.

Some of us watched for the effect on Uncle Jerry and heard his interrogator inquire - "Well, Uncle Jerry, what do you think of her now?"

"B-- b-- b-- by Gosh, they'll never stop her."

Here in Southern California we are blessed with vast economic resources and possibilities which are prevented from realizing their full development because of a serious water supply situation. Not only is the lack of adequate water supplies retarding our growth and expansion, but it is also menacing the stability and security of the development which now exists. The basic fundamental question of this entire area is, "Are we going to make use of what nature has given us, or are we going to stand still and let the growth that is possible here be diverted to some other part of the country, or even to a foreign country?"

In the early part of the 19th Century, Abraham Lincoln's father moved into what was then the frontier West of Ohio and Indiana. He selected a beautiful wooded knoll overlooking a pleasant valley, and built his cabin. When he had it finished he discovered that the nearest stream was over a mile away, and that there was no brook or spring closer. A large part of Abraham's youth was taken up by the long daily trips he had to make for water.

The situation is somewhat similar to that in Southern California. Here by the blue Pacific we have built not one community, but sixty or seventy, and an adequate water supply is several hundred miles away. Southern California, however, is a region infinitely blessed and endowed by nature, and other considerations than water are responsible for its growth: its geographical location with regard to the United States and the world as a whole; the fertility of its soil; the advantages it offers to commerce and industry; and its much discussed climate, are the factors which have made possible this growth so remote from an adequate water supply.

It is remarkable to think that over two million people with Western standards of living can have settled in such a comparatively small area having an average annual rainfall of less than 20 inches. It would have been impossible without the accumulations of water in the great underground basins from which we have been drawing for so many years.

If you examine the rainfall charts of the other great centers of population, you will find in almost every instance an annual precipitation of over 40 inches, or more than twice that of Southern California.

Not only is the average rainfall of Southern California less than 20 inches, but the annual variation is very erratic, going as high as 36 inches, and as low as no rain at all. The important thing that I wish to call to your attention here is expressed in a statement made by Professor Thomas on a recent occasion to the effect that there has not been a similar period of years as dry as the three years from 1897 to 1900 in the thirty years since that time. In other words, Southern California has not had a real dry spell since Los Angeles was a community of only 100,000 people.

The inevitable result of such a meagre and variable water supply attempting to support a great concentration of population is the eventual stopping of all growth, if not the actual breading down of established values. There is a tendency to overlook the seriousness of the situation, with the result that some of our cities are going to wake up to the fact that they are out of water. You can no more build a stable community on land without water, than you can build one on water without land.

Recent reports have shown that our underground basins are very seriously overdrawn. Many of you people here are as familiar with what is happening in the wells of Southern California as any one. Some of you know what it means to keep lowering your pumps each year, and in some cases you know what it means to find the bottoms of your wells dry. It is the worst form of delusion to think that such a situation can continue without disaster.

A recent report by the State Division of Water Rights has shown the present overdraft on the underground basins of the Coastal Plain to be 263 cubic feet per second. When you stop to consider that one cubic foot per second will take care of five thousand people, and will irrigate 483 acres for a year, you can realize what this means. A shortage of a thousand cubic feet per second is predicted by 1950, which would mean a shortage of enough water for five million people, and the consigning of 483,000 cares of land to barrenness. This is the situation we are up against and the one which brought into existence The Metropolitan Water District. It is also the situation that is going to compel The Metropolitan Water District to drive its project forward at the greatest possible speed in order to have an abundance of water in Southern California before another dry spell such as that in 1897 occurs to set back growth and destroy millions of dollars of assessed valuation.

On the other side of this picture it says in simple language that Southern California must have more water from an aquedate and dependable source outside of Southern California.

The District is slowly but surely and carefully speeding up its activities. Our plans are maturing in good shape and our difficulties are being overcome in a gratifying way. We feel certain that when the water arrives in Southern California, it will not be one instant too soon.

With the start on the construction of the aqueduct, a new economic picture will begin to unfold for Southern California. What the aqueduct is going to cost is a matter of great interest to the District as well as to those cities that are intently watching our activities and wondering what they had better do. Present indications are that the cost of the aqueduct may be $225,000,000.

The expenditure of this amount of money will result in two major benefits to the Metropolitan Area: the first will be the immediate economic stimulation which the expenditure of such an amount of money in Southern California will produce. It will mean employment for more men than are idle here today. It will mean renewed and increased activity in commerce, transportation, and industries. Colton and other fine cities at the East end of the Metropolitan Area of the Coastal Plain, are in a particularly favorable location because of being close to the actual construction. Also great quantities of material will undoubtedly have to pass over the transportation systems which converge at this point. Numbers of men and their families will travel to your cities, and many will make their homes there. Those cities which are part of the Metropolitan system will necessarily be given every advantage possible, other things being equal. The entire fabric of your communities, including your factories, industries, and commercial institutions, will participate in the benefits of this work.

The second benefit which will come from the aqueduct construction will follow the water it will bring into this area. Congressman Evans recently said, "California is upon the threshold of its greatest development. When the Colorado Project is completed, manufacturing industries will multiply in this state which are now delayed only by our lack of sufficient water." In my various contacts with the big industries of the East, which I have maintained for a number of years, I find when they consider expansion into Southern Calfifornia that the question of water supply is uppermost in their minds. They are fearful of making great investments which may be made valueless by a shortage of water. Industries

are bound to flock to this region when the aqueduct is completed, not only because of the great local market, but because of the strategic position with regard to coastal and intercoastal commerce, and with the Oriental trade which is just beginning to take on its real importance. I am confident that the growth which will follow the great stream of water will be beyond our most enthusiastic vision.

Doubtless you people here in the Hub City and in neighboring towns, feel the same as I do about the facts and conditions which I have presented to you here tonight. It is only natural that you should, because give an accurate knowledge of what the facts and conditions are, those who think scientifically will arrive at the same conclusion.

In what I have told you here tonight there have been two or three points of particular importance. We in Southern California must realize that not even our present growth is assured unless we get more water; that when we build the great Colorado River Aqueduct, the money put into circulation will stimulate our local economics to such an extent that we will be beyond the complications of any National or International readjustments however long they may take; and finally, when this water is delivered into the arteries of our economic system, the vast possibilities of Southern California will become realized and we will have here a greater, and a finer, and more permanent civilization than exists or has ever existed in this world.

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Talk Delivered at Long Beach July 23, 1930

You gentlemen are to be congratulated on being elected to govern and direct the affairs of the second largest city in the Metropolitan Area of Southern California. I noticed recently with a great deal of interest that Long Beach had made a big gain on your sister harbor city to the South, advancing from the 128th larges city in the United States to the 57th. The growth of Long Beach has been marvelous but justified. Its possibilities are without limit.

A city that can point to the spinning wheels of a newly opened plant of a national industry, and the launching of another of comparable magnitude during a period of general depression, has certainly great possibilities.

In this same period it is interesting to note the passing of the Rivers and Harbors Bill appropriating from the Federal Treasury for the immediate benefit of Long Beach and vicinity, over eight million dollars. If one analyzes what is behind these and the many other contributions to the growth and prosperity of Long Beach, the possibilities of your city become apparent.

You are at the gateway of the Pacific Southwest, and one of the richest and most potential areas of the United States is at your back. An ever improving harbor is placing you in a position, relative to your neighboring cities, to cominate the coastal, inter-coastal and foreign commerce of this region. Around your city are vast resources of oil and gas. The great level areas adjacent to your city are superbly suited for industries. In fact, you have every element necessary for expanison except an adequate water supply.

The water resources of Southern California are very deficient. Relative to the underground supplies, Long Beach is very will situated. But while you are located near the bottom of the bucket, as it were, you are also closest to the danger from salt water intrusion. The engineers of The Metropolitan Water District and many others have carefully investigated the situation. Yoi know what the facts are as well as I. Your own engineers have undoubtedly made thorough investigations. They, and yourselves as well, know how the ground water level has dropped year after year. You know from the reports how many pumps have been lowered, how many wells have been deepened, how many have gone dry, and how many have become too salty to use.

The City of Long Beach once owned the Bouton property on Cherry Avenue. When a well on this property first came in, it spouted over seventy feet into the air. At the present time the water level is standing fifty feet below the surface and below sea level. The great artesian area which once existed here has shrunk from 350 square miles to

practically nothing. Your Water Department records, as you undoubtedly know, tell a story of more, bigger and deeper wells to produce the same amount of water.

A recent report prepared by an outstanding authority (Harold Conkling) states that at the present time there are 45 square miles in this region that have already suffered from the intrusion of salt water. I have been told that wells close to Long Beach have become salty at a considerable distance from the seashore. Information presented to me recently reveals that the standing water level of this area is over two feet below sea leve. that the average pumping level is 28 feet, and that ground water stands at sea level as far inland as Gardenia.

A large growing city cannot afford to overlook facts as vital and important as these. You men are charged by the people of this city with the responsibility of maintaining an adequate water supply. I know you have these matters at heart and that I am telling you something that you already know, though I am not sure that you are aware of how widespread your situation is becoming known. It is particularly alarming inasmuch as water supplies cannot be obtained in a day.

It would be inconceivable for a city the size of Long Beach to gamble with its water supply, upon which its property values depend more than on any other element. You will need every drop of local water obtainable by the time Southern California receives an additional supply from the Colorado River. It is a certainty, in my mind, that Long Beach will have put to use every possible local resource and will be clamoring for more water by the time The Metropolitan Water District aqueduct is completed. Long Beach is not alone among Southern California cities in lacking an adequate water supply. In fact, a number of our cities are in a very much more critical position. However, in regard to water supply, all Southern California cities must, and certainly will, cooperate. It is a regional necessity of paramount importance greater than the interests and influence of any individual, group of individuals, city or group of cities. Matter so critical to the welfare of great numbers of people, and enormous property values, must be treated by intelligent cooperation.

Long Beach is going to grow and in order to do so, she must have more water. There is nothing more certain that that local water supplies are insufficient, and that the only source adequate to the needs of Southern California is the Colorado River.

You people here are responsible for the guidance and direction of your community. You are going to have to face this problem in the immediate future. Sooner or later you will

have to seriously consider The Metropolitan Water District. It is my desire to suggest that you seriously direct your energies to the investigation of this great project and get the City of Long Beach represented on The Metropolitan Board where her nineteen votes would be a factor in guiding and directing this great undertaking in the interest of your city.

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COMMENTS OF W. B. MATHEWS REGARDING

Speech at
SAN BERNARDINO CHAMBER OF COMMERCE BOULDER DAM CELEBRATION

July 28, 1930

As a representative of The Metropolitan Water District I feel I would be disloyal to my associates in that organization, as well as to the people of the community in which I dwell, if I did not voice their sentiments and my own upon this occasion.

Phil D. Swing was a new-born infant in this city not so many years ago. Now he is a distinguished Congressman from this district who is being welcomed on this occasion for his personal merit and notable achievements. Mr. Swing, while yet a young man, has been given a well deserved place among public men of this country for conspicuous service. During his career as a member of Congress from this district he has devoted himself with great industry and intelligence to the discharge of his many duties. He has done his work wonderfully well. The benefits accruing from his efforts have not been confined to his district, nor even to his state. His name is indelibly impressed upon the legislation which has made possible theBoulder Canyon Project. The construction of that project is of nation-wide importance. It will do good to millions of people through all the years to come.

The Swing-Johnson Bill has for nearly ten years been known throughout this land as a piece of legislation of the first rank and importance. That bill has become the Boulder Canyon Project Act, and the Boulder Canyon Project Act resulted in the making by Congress, at its last session, of the initial appropriation of over ten million dollars for the beginning of work on the Boulder Canyon Dam.

Mr. Swing led the fight in the House of Representatives for the passage of the Act and the making of the appropriation. His eloquence, skill and magnetic leadership were crowned with success.

Today he is being welcomed upon his return from his labors in Washington. The representatives of The Metropolitan Water District heartily join with his neighbors here in San Bernardino and his friends throughout this state in extending to him a heartfelt and sincere greeting, together with the assurance that his conspicuous services in behalf of his fellowmen in this Southwest country will never be forgotten.

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A SUMMARY OF THE METROPOLITAN WATER DISTRICT PROJECT

Before the Los Angeles Chamber of Commerce
Water and Power Resources Committee
October 28, 1930

At the request of Chairman Wheeler, I have prepared a statement covering the past activities of The Metropolitan Water District, and its program for the immediate future.

The District is now approaching the end of its second year, having been incorporated in December, 1928. The District is organized for the purpose of developing, storing and distributing a water supply to the metropolitan area of Southern California. The physical area deemed to be a natural part of The Metropolitan Water District, extends from Santa Monica to East of San Bernardino, and from the Sierra Madre Mountains possibly as far South as Newport Beach.

At the present time there are eleven cities in the District: Anaheim and Santa Ana in Orange County; San Bernardino and Colton in San Bernardino County; and San Marino, Pasadena, Santa Monica, Burbank, Glendale, Beverly Hills and Los Angeles in Los Angeles County. The cities of Ontario, Torrance and Fullerton have made application to join and will submit the proposition to their voters in the near future.

The necessity for an additional supply of water from a source outside ofSouthern California was emphasized by the drought of 1924. At that time the Colorado River Aqueduct Association was organized with Hiram W.Wadsworth as Chairman. It was through the Colorado River Aqueduct Association that The Metropolitan Water District Act was introduced and passed by the State Legislature in 1927. After the Enabling Act was passed the organization of the District was conducted by the City of Pasadena, and included the eleven cities first named.

HISTORY OF THE PROJECT

The necessity of bringing water to Southern California from the Colorado River was realized many years ago by William Mulholland, former Chief Engineer of the Department of Water and Power. In 1923 he made a personal reconnaissance of the region between Los Angeles and the Colorado River, with this in mind. Two years later, in 1925, the people of Los Angeles approved a $2,000,000 bond issue for the purpose of beginning the undertaking. The responsibility of starting the survey was assigned to the Department of Water and Power, The Metropolitan Water District not having yet come into existence.

After a careful investigation, the engineers determined that there were five points on the Colorado River at

which it was feasible to build diversion structures. These varied from the Picacho near the mouth of the river, to the Bridge Canyon site about 400 miles upstream. The problem of building an aqueduct from any of these diversion points to Los Angeles involved the crossing of an unmapped area of mountains and desert. Before it was possible to make any estimates, it was necessary to survey 30,000 square miles of unchartered wilderness. The preliminary work of mapping, estimating, exploring and analyzing geology, has been carried on for over five years.

The Metropolitan Water District was organized in 1928 and immediately took over the direction of the work. Mr. Frank E. Weymouth was induced to take the position of Chief Engineer. He is undoubtedly the most qualified man in the world for the task. While ChiefEngineer of the United States Reclamation Service, he wrote the Weymouth report, consisting of four or five bound volumes recommending that the Boulder Dam be built at its present designated location. He has done engineering work throughout North and South America, having built over 40 dams. Just previous to his employment by the District, he was Chief Engineer for the J. G. White Corporation, who built a number of reclamation projects for the Government of Mexico, and was on his way to take charge of a gigantic project in Russia when employed by The Metropolitan Water District.

With the approval of the Board ofDirectors, Mr. Weymouth has built up an engineering organization which could not be duplicated in the United States. Upon his staff is Mr. Julian Hinds, who is considered one of the world's authorities on questions of hydraulic design. There is Mr. James Munn, Chief of Construction, who has had charge of numerous great projects throughout the United States, and recently completed the construction of the Mokelumne Aqueduct for the East Bay Municipal Utility District. There is Mr. J. B. Bonc, Chief Field Engineer, who was at one time Topographer for the United States Geological Survey, and has been connected with flood control projects in China and irrigation investigations in Mexico. The Hydrographic work is under the direction of Mr. C. C. Elder, who has been engaged in stream measurements and hydrographic reports throughout the West and Mexico for a number of years. The Electrical and Mechanical work is under the direction of Mr. James M. Gaylord as Chief Electrical Engineer. Mr. Gaylord is recognized as an outstanding authority in his line and his services were obtained by special arrangements with the Southern California Edison Company.

The District obtained its first income from the tax levy of 1929-1930, and began spending its own money about a year ago. On the first of May of this year a complete separation was effected between the Department of Water and Power and The Metropolitan Water District. There remained at the time of separation a balance of $253,000 in the bond fund of 1925.

A year ago Chief Engineer Weymouth rendered a preliminary report covering his work up to that time. For the purpose of analyzing this report, and of making an independent investigation and recommendations, the Directors of the District selected a Board of Review composed of three outstanding engineers. The men selected were Thaddeus Merriman, Chief Engineer of the Board of Water Supply of the City of New York; Richard R. Lyman, Consulting Engineer of Salt Lake City, Utah; and A. J. Wiley, Consulting Engineer of Boise, Idaho. They were chosen from engineers outside of Southern California in order to obtain a report from men who were unprejudiced and who would bring a fresh point of view and criticism to the work.

The District submitted to this Board of Review studies on 66 different routes from the Colorado River. After careful investigation, including many trips across the desert, they recommended that all but four lines be eliminated, and that special and revised studies be made upon thos indicated. The Engineering Staff of the District has been engaged in this work since the first of the year and are now ready to submit a second report to the Board of Review which will come to Southern California about the middle of next month.

The Metropolitan Water District has maintained a policy of rigid economy. No employees have been put on the payroll that were not absolutely needed, nor who had not previously demonstrated their capacity to do the work assigned to them. Following out this policy, the District has been very cautious in expanding its organization so as to avoid unnecessary expense. The Department of Water and Power is furnishing floor space at the very reasonable rental of 12¢ per square foot per month. For some time the condition has existed whereby any further additions to the staff would require more room than was available at the present location. Consequently, offices have been subdivided and in some instances three or four men are making use of space usually assigned to two. The result has been to give the District very high value for the money expended.

The Treasury Department of the District has been organized with Mr. Charles H. Toll, First Vice-President of the Security First National Bank, as Treasurer. Mr. Toll was drafted to the position and serves without compensation.

The accounting department of the District has been placed under the charge of Mr. J. M. Luney, who is establishing not only a system of general accounts, but also an exact system to keep a running check on the engineering costs. Mr. Luney is eminently qualified for this work, having established numerous water systems on engineering projects throughout the United

States. He was also engaged for a number of years by the United States Government at Washington, D. C. where he installed systems for the various governmental departments, such as the Engineering Department of the United States Army, which has an annual budget of about $50,000,000 a year.

The big event in the history of the District was the negotiation of contracts for water and power with the United States Government, which were executed last spring. Under the terms of the Boulder Canyon Project Act, the Secretary of the Interior is required to have in his possession executed contracts before construction can start on the Hoover Dam, which in his judgment would be sufficient to repay to the Government the money advanced, with interest at 4%. In the contract for water, the United States agreed to store and deliver water to The Metropolitan Water District, not to exceed 1,050,000 acre feet per year at the rate of 25¢ per acre foot. The District's contract for power is an obligation to take and pay for 36% of the firm power to be generated at Hoover Dam, at the rate of 1.63 miles per kilowatt hour. In addition to the foregoing, the District has first right on all the secondary power, at the extremely low rate of .5 mills per kilowatt hour. This power will be necessary in the event the District finds a route involving a pump lift the most economical, due consideration being given to both first cost and annual cost of operation.

While the District is most desirous of obtaining a gravity route, it was necessary to subscribe to the power at the time it was available. Every effort is still being made to obtain the advantages of a gravity route, but it must be emphasized that the District must make its selection purely on the basis of the best economic and engineering principles. Our determined purpose is to find the best, safest, and cheapest route.

The execution of these contracts by the District, and corresponding contracts by the Department of Water and Power and the Southern California Edison Company, has paved the way for the beginning of the Boulder Canyon Project. As you know, $10,660,000 was appropriated by the last session of Congress after a bitter fight, and the ceremony inaugurating the project was held the 17th of last month at Las Vegas.

In further establishing its claims to water from the Colorado River, the District has filed various applications with the Division of Water Resources of the State of California, and with the Federal Power Commission. Also, agreements have been negotiated with the agricultural interests, who have been using Colorado River water for many years. An agreement was reached whereby the District has accorded the right to 550,000 acre feet of Class A water, and 550,000 acre feet from the Class B water, as against the rights of the agricultural group. In the interpretation of this agreement by the agricultural group, a misunderstanding arose which necessitated a supplementary agreement whereby the

agricultural group conceded to The Metropolitan Water District the right to store in the Boulder Dam Reservoir, for the exclusive use of the District, the unused portion of its allocation up to a total of 5,000,000 acre feet. This arrangement has great advantages to the District in protecting Southern California against a longperiod of drought. The working details of this arrangement have been submitted to the Federal Government and are now being worked out.

ACTIVITIES OF THE DISTRICT AT THE PRESENT TIME

At the present time, the District is engaged in making its final surveys. The work on the aqueduct routes is practically complete. Numerous details, such as finding storage facilities in Southern California, laying out distribution systems for delivering water to the member cities equitably and economically, are at present the major concerns of our Engineering Department.

The District is also giving serious thought at this time to the working out of its financial program. The Metropolitan Water District Act is being very carefully analyzed by experts with the view to having it amended in the coming session of the State Legislature in such a way as to give the District every advantage in obtaining a low interest rate and a favorable price for its bonds. For instance, it is proposed to make the bonds of The Metropolitan Water District legal investment for savings banks. It is also planned to make them legal security for active and inactive deposits of the State and other political units.

Another problem on which the District is working at the present time, is the perfection of its scheme of organization. The objective in this case is to set up only those departments and positions that are absolutely necessary to carry on the District's program in the most efficient way. It is realized that by careful planning at this time, costly changes and reorganization will be avoided in the future. This also involves a plan of civil service, to assist in selecting high types of employees.

PROGRAM OF THE DISTRICT

Within the next month, Chief Engineer Weymouth will submit to the Board of Directors an extensive report setting forth the results of the five years of engineering work on this project. This report and all supporting data will be referred to the Board of Review previously mentioned, who will convene in Los Angeles the middle of next month. They will carefully analyze all the data, make independend investigations, probably order supplementary work done, and will submit their final conclusions to the Board of Directors about the first of next year. It is expected that in their report the Board of Review will recommend a route as being the cheapest and best possible.

Following the report, the Board of Directors will make preparations for submitting the proposition to the people for their approval. It is believed that all the work will be ready, and that the time will be most auspicious during the coming spring. When the bonds are voted the District will expand its organization and begin the work, which should be under way about a year from now.

The present situation in Southern Californis is emphasizing the necessity of The Metropolitan Water District advancing its program with all possible speed. Never has the water situation been so critical as at the present time. The District has become a clearinghouse for information relative to water conditions in Southern California. Reports from city after city are to the effect that their wells have dropped two or three times more this year than ever in the past. Ontario is now pumping its water from 350 feet below the surface. Fullerton is very much concerned because its water tables are rapidly approaching sea level, being only about 20 feet above at the present time. At Gardena, to the West, water is already at sea level at a point 15 or more miles from the coast. The greatest fear is not so much the lowering of the water tables as that when a certain low point is reached, salt water will start moving further inland from the ocean. Already in Long Beach salt water has penetrated the area South of the Dominguez Hills, and is working inland a mile or more, and as you probably know, the Standard Oil Company is applying to the City of Los Angeles for the privilege of reclaiming 6,000,000 gallons a day of sewage water from the Hyperion outfall sewer to be used in its big plant.

With these conditions existing at the present time, and the prospect that water will not be available from the Colorado River for seven or eight years, the great question is, will we be able to get the water here in time to prevent Southern California from coming to a standstill and possibly losing millions of dollars in earnings and many millions more in values.

There is a brighter side to the picture, however. In fact as far as prospects of economic advancement are concerned, Southern California is in a most enviable position. The United States Government will, in the next 6 or 7 years, spend upward of $165,000,000 on the Colorado River Project, much of which will find its way into this region. In addition, there will be the circulation of the money expended on The Metropolitan Water District Aqueduct among our people, yielding similar economic benefits.

However, the real economic returns to the people of Southern California from The Metropolitan Water District Aqueduct, will be the security provided for our present investments and financial structure. Without an additional supply of outside water, Southern Californis is in a very dangerous

situation. Colorado River water will do more than stabilize present values; it will make possible industrial expansion and the growth of business and manufacturing along every line.

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THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Written Expressly for

November, 1930 Issue of WESTERN CITY

Modern thought is evolving a new type of government. As we grow and as our social structure becomes more complex, political boundaries are becoming less important. When the Constitution of the United States was adopted, the thirteen states which then made up the Union were as independent as separate nations. Each of them felt more keenly its individuality as a state rather than as an integral part of the Union. With growth and expansion, and particularly since the Civil War, the unity of the Nation has become increasingly more significant. This tendency is manifested in some of our recent institutions such as the Federal Reserve System, which ignored state lines in dividing the Nation into twelve economic areas. The New England States and the old South, areas once most jealous of state prerogatives, are now recognizing the economic region as essential to their best development.

In the PacificSouthwest the states of the Colorado River Basin have recognized the necessity for handling problems of the Colorado River as a region. The benefits to be derived from the water and power from the Hoover Dam will in the future make more manifest the economic unity of this area.

While the tendency to minimize political boundaries is evident in the United States, and in fact to a certain extent throughout the world, the greatest progress and most outstanding results have been achieved in metropolitan regions. The City of London, England, has been outstanding in its achievement along this line on the other side of the Atlantic. Within the United States are numerous examples of successful regional governments. The City of Boston, in the middle of the 19th Century, began coordinating under separate state districts, many of the problems of the densely populated territory within her own limits, and within those of the forty odd communities immediately surrounding. A district was established for the disposal of sewage, another for water supply, and another to develop a comprehensive system of parks and playgrounds. Though these units were originally under independent commissions, there has been a recent movement to consolidate all of them under one organization.

With the growth of New York City and the enormous increase in shipping of the harbor, it early became evident to far-seeing individuals that all of the harbor facilities on both sides of the Hudson and East Rivers should be coordinated under one governmental organization. Here the

metropolitan problem involved portions of several states. A plan was worked out and the necessary legislation passed whereby all of the shipping and terminal facilities of New York Harbor were placed under the jurisdiction of a commission which was given the name of "The Port Authority of New York." Its outstanding success has been a material encouragement to the development of regional governments. There are many other illustrations, such as at Chicago, Los Angeles, San Francisco and Montreal. In every case it has been particularly significant to notice that political boundaries are becoming of less importance and economic areas are becoming more significant.

Large cities bring with their growth new problems in government. When a city has reached a considerable size, a change takes place. Adjacent to, and in the area about all of our large cities, are found numerous smaller or satellite cities. Such a situation is what we know as a "metropolitan area." With the development of rapid transportation and communication facilities, the metropolitan areas have tended to become more unified. The various elements become linked together as in Southern California by extensive highways and interurban electric railway systems. The relationship between cities is drawn closer due to the fact that many business men maintain offices in one city and residences in another.

The unification has been manifested by the development of problems common to the entire area, such as the fire protection, police and health service. The fact that there are many problems which can be solved much more economically and efficiently by one agency has become more thoroughly understood. Efficient regional organizations taking care of common problems, or attending to common interests, have resulted in the saving of many millions of dollars annually. Great savings have been made possible by avoiding duplication of governmental units. In many instances, regional organization coordinating the interests of many cities have solved great problems which would have been impossible of accomplishment by the individual cities.

There are certain problems that are particularly adapted to the regional type of organization and administration. Problems which are independent of political areas such as drainage, flood control, sewage disposal, parks and playgrounds, highway systems, and water supply, are essentially regional problems. While all of these occur in the metropolitan area of Southern California, the most important is water supply. Here in a semi-desert region, the problems of water supply are particularly difficult. No large rivers flow through the area, and great streams of water are only found long distances away.

Water supply, although the most important metropolitan problem in Southern California, is only one of the

elements which make the area an economic unit. Geographically Southern California is comparatively isolated from other similar centers of population. The metropolitan area is about ninety miles long and fifty miles wide and comprises rolling foothills and plains lying between the Sierra Madre Mountains and the sea. In different directions, but at distances of hundreds of miles, are other metropolitan centers, such as San Fransisco, Denver, Salt Lake City, and Phoenix. Connecting them are extensive railway systems, over which annually there is a great exchange of products. Within Southern California itself are sixty some cities tied together by a network of highways and a great interurban electric system, by means of which the cities are brought into close communication and social contact. The entire area has unified interest in the development of a great harbor to take care of the coastal trade and the now opening markets of the Orient.

Probably more fundamental than these in consolidating the metropolitan elements of Southern California is the complementary relationship between its agricultural and industrial parts. In the Western portion and at other places, have developed great industrial centers. In the Eastern part, and between the cities, is a very valuable agricultural territory which annually produces in excess of $150,000,000 in original wealth. The industrial and agricultural production in such close proximity give Southern California a broad economic base. Therefore, it is only natural that in an area so closely coordinated by transportation and communication, by common problems and common interests, that water supply should be the concern of the entire area. This is particularly true inasmuch as practically all of Southern California is faced with the same necessity for a large additional supply of water from an outside source.

Nature has given Southern California a semi-tropical climate, tempered by cool breezes from the Pacific. It is a land of almost continuous sunshine which has been her charm and has drawn to her people from all over the world, both as visitors and residents, but a region of as much sunshine is necessarily one of little rainfall. Consequently, with a great mass of people to be provided for, water supply is fundamental. The rainfall of Southern California occurs in heavy showers in only two or three months during the year. The little rain that falls, rushes rapidly down the steep mountain slopes onto the valley floors, where most of it is absorbed in the underlying gravels. It is water that has been so accumulated underground that has made much of the growth in Southern California possible.

Los Angeles, about twenty years ago, brought in a

large supply from the Owens Valley through an aqueduct 275 miles long. The water from this source is now practically all in use, and the City of Los Angeles is spending $38,000,000 to increase the capacity of the aqueduct to provide water for the period until an additional supply from the Colorado River becomes available. Elsewhere very worthy conservation is going on that will help the less favorable regions of the metropolitan area to carry on until more water can be made available.

In addition to the water necessary for growth, a reserve is necessary to take care of the possibility that droughts may occur. The disasters in the Middle and Eastern states due to drought this year, is a warning that will undoubtedly stimulate the construction of The Metropolitan Water District Aqueduct.

The water from the Colorado River will be brought into Southern California by The Metropolitan Water District, which is a new development in the regional type of government, organized in 1928. It permits non-contiguous cities to join together for the purpose of developing, storing and distributing a water supply. At the present time there are included in the District the following eleven cities: Anaheim, Beverly Hills, Burbank, Colton, Glendale, Los Angeles, Pasadena, San Bernardino, San Marino, Santa Ana, and Santa Monica. Their total population is 1,700,000 or about 70% of that within the metropolitan area. The assessed valuation of the cities in the District is approximately $2,100,000,000, representing over 70% of the valuation of the cities within the area.

The District is governed by a Board of Directors whose members are appointed by the various city governments. Each city is entitled to one vote for each $10,000,000 of its assessed valuation, with a limitation, however, that no city shall have more than 50% of all the votes.

The District has power to levy taxes within certain limitations, and can incur a bonded indebtedness up to 15% of its assessed valuation. The costs of the project are distributed on the basis of assessed valuation, which is also the basis on which the water will be divided.

With the coming of water from the Colorado River a new economic era will begin in Southern California. The cities of The Metropolitan Water District are looking forward to the time when the water will become available. To them it will mean, in addition to security and protection of

present growth and values, the acquisition of the elements necessary to realize their full economic and industrial potentialities. With an abundant and assured water supply, expansion will take place along every line of community activity. Industries will be attracted, which will mean more resources of employment. The number of people ultimately residing in Southern California will be limited only by the area available for residences and the ability of the communities to supply their people with work.

A new inducement will be made to those industries which require a large volume of relatively cheap water. The expansion of great industrial concerns into this area will follow to take care of the large communities that are building up along the West Coast, and to serve the great markets which are now developing in the Orient. And as the population and the number of industries in Southern California increases, the economic unity of the Pacific Southwest will be correspondingly increased. The manufacturing plants of Southern California will draw their raw materials in greater quantities than at present from all the Western States. Also, as local food supplies are consumed, greater demands will be placed upon Arizona, New Mexico, and other states, for beef, mutton, and farm products. The result will undoubtedly be to extend in an unprecedented degree, and in ways yet unthought of, the new regional type of government, to the problems of the Pacific Southwest, which will become increasingly more unified in its economic structure.

It is not only with the mind on present necessity that the great Metropolitan Aqueduct is being built, but with a penetrating eye on the future. In water supply a community must always have its plans made at least thirty years in advance. It takes time to develop gigantic water systems and it is too late to build when the necessity has already matured.

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WHAT THE METROPOLITAN WATER DISTRICT AQUEDUCT MEANS TO SOUTHERN CALIFORNIA

Before the Community Service Division
of the
Los Angeles District of the Federation of Women's Clubs

December 4, 1930

Chairman, Ladies and Gentlemen:

Some time ago Mrs. Holloway requested that as Chairman of the Metropolitan Water District I address this Conference on the Value of Water and Its Importance to the Growth of Population in Southern California, particularly with regard to the Importance of an Additional Supply from an Outside Source. It is my purpose to discuss briefly the evolution of our water supply problems in Southern California; our present situation with respect to water supply; and what the bringing in of an additional supply from the Colorado River will mean to the future of Southern California.

To thoroughly understand water conditions in Southern California at the present time, we should know the experience of the past. This area in which we live is a part of the great American Desert which stretches far to the East across Arizona and New Mexico. Its problems are those of the desert and the most important of them is water supply. Through the ingenuity of man the desert has been pushed back and the delightful area between the mountains and the sea, designated as the Metropolitan Area of Southern California, has been made to bloom and flourish. Beyond the mountains still exists the original desert which proved a tremendous obstacle to the westward advance of pioneers into this area. As long as there has been life in this part of the world, water supply has determined its existence. In a recent conversation with Secretary of the Interior Dr. Ray Lyman Wilbur, he told me out of his abundant scientific knowledge, some interesting and astounding facts. We were at the time discussing water supply conditions in the Pacific Southwest and he pointed out that all the great beasts whose remains are housed in museums at Exposition Park, perished as species for lack of water. Some great physical changes took place which caused the climate to become very much dryer. Just what these changes were we do not know. But we do know that of all the various forms of life whose remains have been preserved in the La Brea asphalt pits, the only one which survives at the present time is the little pocket gopher. This little animal, living as it does underground, and sub sisting on the roots of plants and the moisture which

accumulates in its burrows, was adapted to the resistance of drought, when those that roamed the surface and depended upon vegetation for food, and springs and streams for drink, died.

I do not believe that these facts indicate that the climate of Southern California is becoming dryer, but it does indicate the importance of rainfall to animal life in desert regions.

Since the coming of the white man the history of this region, particularly in its economic phases, has been expressed in terms of water supply. The missions were established by the Padres near flowing streams. They planted their grain in the moist valleys. In the mission gardens the seeds and cuttings transported from Mexico and Spain grew and flourished with careful watering in a way that astounded the simple mission Fathers. However, the dryness of climate, and the limited markets discouraged agriculture, while the open rolling hills, on which the grass grew luxuriantly after the winter rains, were conditions ideal for cattle raising. The horses and cattle imported by the Spaniards soon multiplied into enormous herds. Their increase, however, eventually overtaxed the meager water resources then available, with the result that at intervals a succession of droughts occurred causing either by thirst or by slaughter, the death of thousands of cattle and horses. The great drought which occurred during the years 1862 and 1863 was so dreadful in its destructive effects as to practically put an end to stock raising in Southern California.

Beginning about that time attempts were made at dry farming which proved moderately successful. It was during the latter part of the last century that the San Fernando Valley produced its great crops of hay and grain. Dry farming came to an end with the discovery that the underground gravel beds were filled with water which had accumulated through the ages. The water became available by the development of improved well-drilling methods and the perfection of pumping machinery. Also, the science of irrigation took a long step forward when the industrious gringo discovered what the mission Fathers had known so well - that water applied to the fertile soil, under the warm sun of Southern California, produced magnificent fruit in abundant yields.

The story to the present time under the stimulation of improved irrigation practice, has been one of rapid expansion of orchards and farms. This expansion is still going

on. During the past eight years, 21,000 additional acres have been planted each year in the Santa Ana basin to citrus fruit alone. The result is naturally and inevitably just what might be expected. Our meager rainfall, which is only from one-third to one-fourth of that in other large centers of population, has not been adequate to keep up with the demands. The amount of rain which falls on the valleys and mountains during our short winters and percolates into the underground gravels, is not sufficient to restore the quantity that is pumped from the wells. While a great part of the requirement for water in this area is for agricultural purposes, a tremendous supply is also needed for domestic use in homes and to maintain the gardens for which our land is famed. Most of you have witnessed, or are familiar with the growth of the City of Los Angeles, which expanded from a population of 104,000 in 1900 to 1,323,000 people in 1930. In order to wupply the multiplying population, an aqueduct 250 miles long was built in 1912 to bring water from the High Sierras. However, in spite of this additional contribution to our local resources, the consumption now exceeds the total supply by 50 second feet. This shortage at present is an amount of water sufficient to irrigate 25,000 acres or to supply 250,000 people for a year. The shortage stated has been determined by Mr. Harold Conkling, Chief of the Division of Water Resources of the State of California, after an exhaustive investigation. The shortage of which I speak, of course, is being made up by drawing out of our underground basins, water that has accumulated there during all the ages of the past. The inevitable result has been a continual lowering of the water level in the wells until at the present time in many places throughout Southern California water is being pumped from the astounding depth of 350 and more feet. The annual increase in consumption due to the increase in population and in citrus acreage, and due to the fact that the basins become narrower as they go down, the rate of lowering has become greater each succeeding year. If this continues, we will eventually reach the point where 25,000 acres must be abandoned, or 250,000 people must be asked to leave each year, unless an additional supply is obtained from a source outside of Southern California.

As the water table continues to lower below the level of the sea we are faced with the danger of slat water flowing inland to destroy whatever supply remains. The County Flood Control Engineer recently reported that 45 square miles in the vicinity of Los Angeles has been encroached upon by salt water flowing inland from the Pacific Ocean.

If our underground basins, on which so many of the cities of Southern California depend, are exhausted, or the water is rendered unfit for use by salt, before new supplies can be brought in from an outside source, the destruction of property values will be enormous.

The Metropolitan Water District has been assigned the task of bringing in a new supply sufficient for the needs of Southern California for a great many years. Engineers of the District have investigated all possible sources in the territory surrounding Southern California. As a result of their studies, the Colorado River has been determined the only source capable of supplying a large quantity of water, to which an aqueduct can be built at a reasonable cost. The engineering surveys have been in progress for six years. Our Chief Engineer, Mr. F. E. Weymouth, has just now concluded his investigations as to the most feasible and economic route and method of bringing water into this area. Within the nest few months a final selection of a route will be made. Shortly thereafter the matter will be referred to the voters for their approval of the bond issue necessary to finance this great undertaking. At such a time the District must look to all of the leaders and forward-looking people of Southern California, the women of whom are so well represented here today. We must look to you people with vision to assist in carrying on for Southern California. Through your cooperation the important facts about the water conditions can be brought home to our people who do not have an opportunity to learn about them.

The coming to Southern California of Colorado River water, which we hope may be brought here soon enough to avert the disaster of a severe drought, will mean a sense of security and stability against the threat of the desert.

The Colorado River is a magnificent stream over 1700 miles long, rising in the heart of the Rocky Mountains. Down its channel flow the rains and melted snows of an area of 244,000 square miles. By drawing from a watershed so great and so diversified, we can eliminate the danger of a great local drought affecting Southern California and the Owens Valley.

Southern Californis is a land of destiny. It is in places such as this that the great civilizations of the world have been fostered and have matured. In Egypt, in Mesopotamia, in Greece, the outstanding civilizations of the ancient world developed in the warm sunshine of the desert

where abundant water supplies were available. Southern California is due to become another such center of civilization. It is in places such as this that people long to live. Throughout the United States, particularly in the places where the winters are bitter, eyes are turned on Southern California. The only limitations to our population are the capacity of the region to supply labor and an adequate water supply. On the security which will follow the bringing of Colorado River water to Southern California by The Metropolitan Water District Aqueduct, will rise up a civilization in all respects finer and greater than any in the past. We are gathering here great industries and are expanding our commerce to all corners of the world. From these will flow great wealth, and wealth has always been the patron of culture, of the arts and the sciences.

Even now Southern California has become the gathering place of men of genius; scientists, artists, and men of letters. Our claims to culture are supported by our magnificent public buildings, by our superb schools, and by the beauty of our homes and gardens. It is to preserve these and continue the growth so far splendidly achieved that we must preserve the present and safeguard the future by bringing to Southern California an abundance of water from the Colorado River.

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WHAT THE METROPOLITAN WATER DISTRICT AQUEDUCT

MEANS TO SOUTHERN CALIFORNIA

Before the Los Angeles League of Women Voters

January 21, 1931

At the request of your President, Mrs. O Shepard Barnum, I have come to speak to you today on The Metropolitan Water District. Any discussion of water supply in Southern California would be incomplete if The Metropolitan Water District were not included. The people of Southern California are looking confidently to The Metropolitan Water District to provide the water necessary to safeguard our investments and to insure the continuation of our growth.

In regions of little rainfall such as Southern California, water is the key to existence. In making these brief remarks on The Metropolitan Water District, it is my purpose to discuss the evolution of water supply problems in Southern California; our present situation with respect to water supply; and what the bringing in of an additional supply from the Colorado River will mean to the future of Southern California.

To understand thoroughly water conditions in Southern California at the present time, we should know the experience of the past. This area in which we live is a part of the great American Desert that stretches from the Pacific Ocean far to the East across Arizona and New Mexico. Its problems are those of the desert and the most important of them is water supply.

Through the ingenuity of man the desert has been pushed back and the delightful area between the mountains and the sea, known as the Metropolitan Area of Southern California, has been made to bloom and flourish. Beyond the mountains still exists the original desert which proved such a tremendous obstacle to the westward advance of pioneers into this area. As long as there has been life in this part of the world, water supply has determined its existence. In a recent conversation with Secretary of the Interior Dr. Ray Lyman Wilbur, he told me out of his abundant scientific knowledge, some interesting and astounding facts. We were at the time discussing water supply conditions in the Pacific Southwest and he pointed out that all the great beasts whose remains are housed in the museum at Exposition Park, perished as species for lack of water. Some great physical changes took place which caused the climate to become very much dryer. Just what these

changes were we do not know. But we do know that of all the various forms of life whose remains have been preserved in the La Brea asphalt pits, the only one which survives at the present time is the little pocket gopher. This little animal, living as it does underground, and subsisting on the roots of plants and the moisture which accumulates in its burrows, was adapted to the resistance of drought, when those that roamed the surface and depended upon vegetation for food, and springs and streams for drink, died.

I do not believe that these facts indicate that the climate of Southern California is becoming dryer, but it does indicate the importance of rainfall to animal life in desert regions.

Since the coming of the white man the history of this region, particularly in its economic phases, has been expressed in terms of water supply. The missions were established by the Padres near flowing streams. They planted their grain in the moist valleys. In the mission gardens the seeds and cuttings transported from Mexico and Spain grew and flourished with careful watering in a way that astounded the simple mission Fathers. However, the dryness of the climate, and the limited markets discouraged agriculture, while the open rolling hills, on which the grasses grew luxuriantly after the winter rains, were conditions ideal for cattle raising. The stock imported by the Spaniards soon multiplied into enormous herds. Their increase, however, eventually overtaxed the meager water resources then available, with the result that when a drought occurred thousands of cattle and horses perished.

The great drought during the years 1862 and 1863 was so dreadful in its destructive effects as to practically put an end to stock raising in Southern California.

Beginning about that time attempts were made at dry farming which proved moderately successful. It was during the latter part of the last century that the San Fernando Valley produced its great crop of hay and grain. Dry farming came to an end with the discovery that the underground gravel beds were filled with water which had accumulated through the ages. The water became available by the development of improved well-drilling methods and the perfectionof pumping machinery. Also, the science of irrigation took a long step forward when the industrious gringo discovered what the mission Fathers had known so well - that water applied to the fertile soil, under the warm sun of Southern California, produced magnificent fruit in abundant yields.

The story to the present time under the stimulation of improved irrigation practice, has been one of rapid expansion of orchards and farms. This expansion is still going on. During the past eight years, 21,000 additional acres have been planted each year in the Santa Ana basin to citrus fruit alone. The result is naturally and inevitably just what might be expected. Our meager rainfall, which is only from one-third to one-fourth of that in other large centers of population, has not been adequate to keep up with the demands for water. The amount of rain falling on the valleys and mountains during our short winters and percolating into the underground gravels, is not sufficient to restore the quantity that is pumped from the wells. While a great part of the requirement for water in this area is for agricultural purposes, a tremendous supply is also needed for domestic use in homes and to maintain the gardens for which our land is famed. Most of you have witnessed, or are faimiliar with, the growth of the City of Los Angeles, which expanded from a population of 104,000 in 1900 to 1,323,000 in 1930. In order to supply the needs of the multiplying population, an aqueduct 250 miles long was built in 1912 to bring water from the High Sierras. However, in spite of this additional contribution to our local resources, the consumption now exceeds the total supply by 263 second feet. This shortage at present is an amount of water sufficient to irrigate 25,000 acres of land or to supply 250,000 people for a year. The shortage was determined by Mr. Harold Conkling, Chief of the Division of Water Resources of the State of California, after an exhaustive investigation. The shortage which I have stated, of course, is being made up by drawing out of our underground basins, water that has accumulated there during all the ages of the past. The inevitable result has been a continual lowering of the water level in the wells until at the present time in many places throughout Southern California water is being pumped from astounding depths, exceeding 350 feet. The annual increase in consumption due to the increase in population and in the citrus acreage, and due to the fact that the basins become narrower as they go down, the rate of lowering has become greater each succeeding year. If this continues we will eventually reach the point where 25,000 acres must be abandoned, or 250,000 people must be asked to leave each year, unless an additional supply is obtained from a source outside of Southern California.

As the water table continues to lower below the level of the sea we are faced withthe danger of salt water flowing inland to destroy whatever supply remains. The County Flood Control Engineer recently reported that 45

square miles in the vicinity of Los Angeles have been encroached upon by salt water from the Pacific Ocean. If our underground basins, on which so many of the cities of Southern California depend, are exhausted, or the water is rendered unfit for use by contamination with salt, before new supplies can be brought in from an outside source, the destruction of property values will be enormous.

The Metropolitan Water District has been assigned the task of bringing in a new supply sufficient for the needs of Southern California for a great many years. The engineers of the District have investigated all possible sources in the territory surrounding Southern California. As a result of their studies, the Colorado River has been determined the only source capable of supplying a sufficiently large quantity of water, to which an aqueduct can be built at a reasonable cost. The engineering surveys have been in progress for six years. Our Chief Engineer, Mr.F. E. Weymouth, a few months ago concluded his ivestigations as to the most feasible and economic route and method of bringing water into this area. Since then an Engineering Board of Review consisting of Mr. Thaddeus Merriman, Chief Engineer of the Board of Water Supply of the City of New York, Mr. Richard R. Lyman, Consulting Engineer of Salt Lake City, and Mr. A. J. Wiley, Consulting Engineer of Boise, Idaho, have made an independent investigation. These men were chosen after a careful analysis of the records of the 44 most outstanding engineers of America whose experiences qualified them for the work.

Acting on their recommendations and those of the Chief Engineer, the Board of Directors has officially adopted the Parker Route as the best, safest, and most economical, all things being taken into consideration. This route would divert water from the Colorado River at a point in San Bernardino County due east of Los Angeles. It will involve the construction of an aqueduct 252 miles in length. The amount of water supplied will take care of our present overdraft and provide for our growth requirements until at least 1980.

The work of the District is progressing deliverately and surely. Sooner or later the voters residing within the Metropolitan Water District will be called upon to vote the funds necessary to build the project. At that time the District must look to all of the leaders and forward-looking people of Southern California, the women

of whom are so well represented in this organization, for support. Through your cooperation the important facts about water supply conditions can be brought home to our people who do not have an opportunity to learn about them.

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Before the

METROPOLITAN WATER DISTRICT ADVANCEMENT ASSOCIATION

February 5, 1931

Mayor Porter has requested that I speak to you tonight about The Metropolitan Water District. There is no subject so vitally important to Southern California as this one. Evidence from all quarters of our country shows conclusively that the eyes of the nation are watching our development. They see the energy and enthusiasm for which Southern California is famous stepping out to lead the world in this great water supply undertaking, just as we did when the Owens Valley Aqueduct was built. Engineers, financiers, and leaders of foreign countries are also watching us with interest. It is universally known that the fastest growing metropolitan area in the world must have more water to continue its growth.

As Chairman of the Board of Directors of The Metropolitan Water District, Mayor Porter has called upon me to discuss some phases of this great project.

A project as large as that assigned to the Metropolitan Water District has a multitude of aspects. There are two that I feel should be discussed at this time. The first deals with the situation which makes necessary the expenditure of enormous sums of money for water supply. The other relates to the underlying principles and policies upon which this project is being developed.

Modern civilized communities are founded on ideas of stability and continuity. All the plans of community development are predicated on a theory of enduring existence. Each generation feels keenly a responisbility to the one which will succeed it. In no respect is this responsibility more completely acknowledged than in matters of water supply. It is an accepted principle that a large city should make provision for anticipated requirements thirty years in advance. In other words, we build as much for those who are to come as for those who are here. A region cannot expand and then make provision for more water. We cannot wait until another million people have come and then tell them to hold on a bit until we find them a water supply. Food, clothing, and the other necessities of life can be quickly provided. It is largely a problem in transportation. The water supply, however, requires years of careful study, followed by years of construction before it becomes available.

The providing of adequate water supplies for growing communities is one of the greatest responsibilities with which public officials are charged. The Metropolitan Water District feels gratified and assured by the deep knowledge and constructive attitude which Mayor Porter has always manifested. We all know and appreciate that Governor Rolph understands these problems and responsibilities, having for so many years guided the destiny of our great sister city to the north. There can be no insuperable problems in these great community undertakings where the leaders are able and thoroughly understand the problem.

The Directors of The Metropolitan Water District are keenly conscious of the responsibility that rests upon them. On behalf of their respective cities they are charged with the task of supplying the water needs of two million people who now dwell here and several times that number who will undoubtedly come to Southern California in the next thirty years; the water necessary to make stable and protect seven billion dollars in property values; the water requirements of industries producing $1,166,000,000 of manufactured products each year; the water needs of hundreds of thousands of acres of orchards and horticultural lands, turning into our economic channels each year over $100,000,000 of primary wealth.

Southern California, as it exists today, is the sum total of all that has happened heretofore. In the development of the Coastal Plain, which has created the fifth larges city in the United States, there have been four distinct economic periods. These periods were, in a large measure, defined and determined by matters relating to water supply.

The pastoral period began with the coming of the white man. The cattle he brought soon multiplied on the fertile grassy plains into enormous herds. These herds were the source of a very valuable trade in meats, tallow, and hides. The industry, however, suffered tremendous losses due to the frequent droughts. In the twenty-two months drought of 1828-1829, forty thousand animals perished. At such times the wild horses were driven over the cliffs into the ocean to save the feed. The older animals were cut out and slaughtered. This condition, together with other factors, practically brought

the pastoral era to a close with the great drought of 1862 and 1863.

There began about that time, a period of dry farming. The valleys and rolling hills of Southern California shimmered with great fields of wheat and barley. This period of broad dry farming activity gradually gave way before the advance of irrigation knowledge and practice. In the latter part of the last century began the great citrus industry. It grew rapidly with the development of better and more efficient machinery for pumping water. The underground basins, in which great stores of water had accumulated through the ages, were drawn upon more and more heavily as the irrigated acreage increased.

At the beginning of the present century the industrial era began. For thirty years it has been increasing at an ever accelerated rate. As a part of the industrial expansion, came the great increase in population. The foresighted community leaders of Los Angeles about twenty-five years ago, realized that the local water supplies were rapidly becoming inadequate. To supply the deficiency the Owens Valley Aqueduct was built, which to this day is a monument to the community and its leaders who built it. In boldness of conception, in thoroughness and efficiency of execution, we believe it will be exceeded only by the Metropolitan Aqueduct.

The water which the Los Angeles Aqueduct brought in is now practically all put to use. Once more we are faced with the necessity of going afield and bringing in the water necessary for the existence and growth of Southern California. The needs of our people, our industries, and our orchards, demand immediate action.

The Metropolitan Water District has been on the job a little over two years. The engineering work was started four years before, in 1924, and has been unceasingly carried forward. In a relatively short time the preliminary work will be completed and the project ready for construction.

At this time it is well to consider the principles and policies which the Directors recognize in carrying forward the work. The Metropolitan Water District of Southern California is the newest development in governmental machinery. During the past seventy-five years great progress has been made in recognizing economic areas

as governmental units rather than arbitrarily designated political subdivisions. These ideas are being fostered throughout the world. The United States of Europe, now being proposed, is evidence of the movement abroad. The basis of the plan proposed by a former French Premier is purely economic. America has many illustrations, one of the more important of which is the organization of the drainage basin of the Colorado River into an economic unit by the Santa Fe Compact.

The Metropolitan Water District is outstanding in that it permits widely separated, non-contiguous cities to cooperate in a water developing program which is essential to the economic area of which they are integral parts.

The harmonious spirit in which the representatives of eleven different cities have worked and cooperated is a tribute to the soundenss of the idea. Like all successful government, much depends upon the caliber and quality of the men who are at its head. All of the Mayors of the Metropolitan cities are to be complimented on their selection of men. As Chairman of the Board I wish particularly to express my appreciation to Mayor Porter for the men he has assigned to theMetropolitan Board representing the City of Los Angeles. The four Los Angeles Directors, other than myself, constitute a splendid cross-section of the city's life, with John Bullock bringing to our work the commercial viewpoint; John R. Richards the legal; H. L. Honnold the technical; and Mr. Eisner that of finance and realty.

Supplementing these we have the services of Mr. Charles H.Toll and Mr. D.W. Pontius, who have proven their capacities in connection with great enterprises. These men, as well as the Directors, serve without any compensation whatever. All of them are devoting their time purely from a sense of civic duty and patriotism. With men such as these giving freely of their valuable time, it is assured that the project will be developed along the right lines in a thoroughly efficient and businesslike manner.

In line with the principles of metropolitan or regional government, the Directors have undertaken the task from a broad economic viewpoint. Water supply is not the problem of any city or any part of Southern California, it is the problem of all. Our undertaking was financially practical, feasible and complete from the

inception. However, the greatest good can only be achieved by the broadest participation within the limits of the Coastal Plain, which has been defined as those portions of Los Angeles, San Bernardino, Riverside, and Orange Counties lying between the mountains and the sea.

In developing the project, it has been the policy of the District to treat it in a broad, yet conservative manner. A physical illustration of this policy in application is revealed in the selection of the Parker Site as the diversion point for the Aqueduct. The fact that utilization of this site was independent of other developments along the Colorado River and the attitude of the State of Arizona was regarded as important, but not decisive. Wherever possible, both in the physical, financial and operative aspects of the problem, the Directors will consider the broadest possible scope of alternatives. For instance, the proposal was recently made by the Federal-State Commission to aid the Metropolitan Water District by underwriting its bonds and guaranteeing their payment. Regardless of the fact that the District is a complete physical and financial entity and as such is prepared to go ahead, the proposal will be given thorough consideration. Should the investigation reveal useable elements of uncompromising advantage to the District, it is believed they can be obtained without interfering with the urgent program now under way of bringing Colorado River water to the Coastal Plain of Southern California.

In its progressional and operative policies certain well-defined ideas have srystallized. It is believed that those portions of the area lying between the mountains and the sea from the San Fernando Valley to Orange County, which constitute the Coastal Plain, and that such portions thereof to which the aqueduct system can economically deliver water, is regarded as the ultimate economic area to be included within the District.

Applications for annexation of cities and areas within the foregoing limits will be considered. Consent to join will, however, be determined upon the basis of mutual advantage between the District as constituted, and the area. The Directors are of the opinion that water shall be sold only within the limits of the District, at wholesale rates which shall be uniform for like classes of service throughout. In cases where water can be applied to the soil and directly or indirectly become available

as underground storage, the prices charged for such water shall be at as low a rate as may be economically possible or desireable.

The District will deliver water to the eleven original member cities and those cities whose applications prior to March 1, 1931, have been approved, and to such other points within the District as the Directors may determine. In designing the feeder system special consideration will be given to areas of large potential consumption. In order to conserve water, subsurface storage will be used wherever possible. In creating subsurface storage the District proposes to so conduct, organize, and control the area so that the water originating in the aqueduct system which may reach and replenish underground basins, may be recovered.

In delivering water to all of the areas within the District it is held in mind that domestic use shall always be regarded as the dominate use.

The policy of the District in regard to its personnel organization is that it shall be built upon capacity and experience. This is fundamental and necessary to the success of any great public undertaking.

As I said before, this project will soon be under actual construction. Within its scope lies the present stability and the future growth of this region. Southern California is beyond doubt a land of destiny. It is in places such as this that the civilizations of the world have been fostered and have matured. In Egypt, in Mesopotamia, in Greece, the outstanding civilizations of the ancient world developed in the warm sunshine of the desert where water supplies were available. Southern California is due to become another such center of civilization. It is in places such as this that people long to live. Throughout the United States, particularly where the winters are bitter, eyes and minds are turned on Southern California. The only limitations to our population are the opportunities to live here made possible by an adequate water supply. On the security which will follow the bringing of Colorado River water to Southern California by The Metropolitan Water District Aqueduct, will rise up a civilization in all respects finer and greater than any in the past. We are gathering here great industries and are expanding our commerce to all corners of the world. From these will flow great wealth, and wealth has always been the patron of culture, of the arts and sciences.

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PUBLICITY STATEMENT RE PARKER ROUTE

1931

NEED FOR WATER:

Air is given to man; water, food and shelter he must get for himself. The providing of water in Southern California has persisted through the years as an unsolved problem. In their turn the cattlemen and dry farmers went down before our almost rainless sunshine. The irrigationists and the city's dwellers are watching their water reserves diminish year after year. Occasionally a wet year brings false hope that soon dissolves. Even the supply Los Angeles brought from the Owens Valley was only a temporary relief from the necessity for more water.

Throughout the highly developed coastal area lying between the mountains and the sea, the story of water supply has been one of wells dropping year after year. Pumps are now penetrating 300 feet and more into accumulated reserves of the ages; in many places our fresh water is below the level of the Pacific Ocean; salt water is moving inland, appearing in wells miles from the sea.

There is no let-up in the demand for more water. Every year more people, more orange groves and more tall buildings are increasing the shortage which even now is far in excess of what the skies can provide. The population influx to Southern California has increased until three out of every five people settling west of the Rocky Mountains come here. A recent report from Orange County made the astonishing revelation that 160,000 acres of new citrus trees had been planted in eight years in the Santa Ana basin alone. This in spite of the statements recently issued from a reliable source in Riverside that less than 53 per cent of the usable area in that basin was now under cultivation, with an overdraft of 22%.

Increasing use with more overdraft can mean only inevitable disaster. It is burning the candle at both ends. The important fact to remember is not that the receding water tables and salt water encroachment must be stopped, nor that we must have more water on which to grow, but that we must have enough to preserve the wealth, productiveness and beauty for which Southern California is famed.

COLORADO RIVER WATER IS THE ONLY AVAILABLE SOURCE

In setting out to obtain a much needed additional water supply, The Metropolitan Water District engineers have

investigated all possible sources. The High Sierras, the northern part of the State, and the Pacific Ocean, have all been proved infeasible of impracticable. The problem swiftly narrows down to one source - the Colorado River.

The water supply tributary to Southern California, that is, south of the Tehachapis, exclusive of the Colorado River is less than one per cent of the state's total resources. The Colorado River is a practically unregulated stream, varying in flow from eight million to twenty-eight million acre feet a year. The water now wasting in the Gulf of Lower California, will be accumulated behind Hoover Dam in a lake 115 miles long, and 585 feet deep at the dam. Out of this storage will come, through contract with the Federal Government and by proper grant of appropriation and agreements, the right to divert water from the Colorado River.

The power plant at Hoover Dam will supply the energy to lift the water over intervening mountains.

The water of the Colorado River is unusually free from pollution. Its mineral content compares favorably with much that is now in use in California. The character of the silt it carries makes it very simple of removal.

THE METROPOLITAN WATER DISTRICT THE PROPER ORGANIZATION

The bringing of water from the Colorado River across 250 miles of desert is necessarily a gigantic undertaking. No city or part of Southern California, with the possible exception of Los Angeles, could undertake the project alone. The same situation of failing water supplies exists in all parts of the area. It involves over sixty cities and an area of about 1,400,000 acres. The cities and the areas between have common economic problems of production and consumption.

Such a situation naturally dictated a cooperative enterprise to distribute the burden of expense and distribute the water supply. The regional type of organization has proved eminently successful at Boston, New York, Chicago, Oakland and elsewhere. It is essentially a non-political and non-profit organization. The benefits from the enterprise are in the same proportion, as the expense and the unit of burden are equal throughout the District.

THE PARKER IS THE BEST ROUTE

In the investigations to determine how Colorado

River water could be best brought to Southern California, over sixty routes were studied. Careful analysis shows the one diverting near Parker, Arizona, to be the best, all things considered. The geology is safest and less danger from earthquake damage exists. It is least expensive, with the exception of two routes which are impracticable. Water delivered by this aqueduct will eventually have the least cost of any. It lies entirely upon California soil, and has the advantage of excellent intermediate storage.

THE PROJECT SHOULD BE COMPLETED IMMEDIATELY

The necessity for water for stability and growth is driving the project forward. A major shortage of water will destroy in value many times the cost of the project. It would also undermine our financial stability. The trade and industry now being retarded for lack of water will spring forward when a new supply is obtained or assured.

Aside from the necessity of water, there is a great need for employment. With this project under way, thousands of men could be put to work. Present conditions in the equipment and material markets are favorable to the building of the project at low cost. When the work is once begun, the natural high rate of population growth will be stimulated. With every new home and new family, the burden of the undertakins is reduced. In ten years we should more than double our population, thereby reducing the burden of this project to half.

SUMMARY

The Metropolitan Water District is proceeding with the aqueduct project with a number of fundamental facts well fixed in mind. It is thoroughly recognized that falling water levels, encroachment of sea water and the possibility of a drought make a large supply of additional water an absolute necessity.

On a vanishing margin of reserve depends the stability and growth of our population, agriculture and industry. Furthermore, the Colorado River, a stream 1700 miles long with a Rocky Mountain watershed of 244,000 square miles, is the only feasible source.

A cooperative organization such as The Metropolitan Water District, making water available to all parts of

this area in need, and distributing the burden equitably in proportion to the benefit, must be charged with the responsibility. Engineering surveys show conclusively the Parker Route is the best, safest and most economical way in which water can be conducted to Southern California.

The critical condition existing in the water supply of Southern California cities and farms, together with the need for employment, and the low cost of construction material and equipment, make it imperative that the work proceed as rapidly as possible.

* * * * *

Before the

PRESENT DAY CLUB OF RIVERSIDE

March 23, 1931

Mr. Chairman, Ladies and Gentlemen:

About two months ago, there came before the Board of Directors of The Metropolitan Water District a communication from the City Council of the City of Riverside. The communication was an application in which our Board was requested to give its consent to the holding of an election in Riverside for the purpose of submitting to the citizens of this city the proposition of becoming a part of The Metropolitan Water District.

This application, filed in proper form under the law, was referred to the Legal Department and the Engineering Department of the District for their consideration. In due time, the District's General Counsel and Chief Engineer filed their reports. In substance, our General Counsel reported that, under the laws governing the operations of the District there was no legal obstacle to the admission of Riverside - if the electors of Riverside chose to authorize such a step. In the same way, our Chief Engineer reported that there appeared to be no engineering condition preventing the admission of Riverside into the District - providing the citizens of Riverside chose to have their city become a part of the District.

Acting upon the reports of its Legal and Engineering Departments, the Board of Directors approved the application from the City of Riverside, and adopted a resolution enabling your city officials to submit to the voters of Riverside the proposition of entering the District.

It is important to keep in mind the fact that no officer or employee of The Metropolitan Water District ever advanced or encouraged the proposition of having Riverside join the District. It is not the policy or the function of the District to urge or encourage the entrance into the District of any city now outside the District.

So far as the District Board was and is concerned, the question of Riverside voting upon the proposition of entering the District is entirely a legal and an engineering question. Whether you WANT to come in, and whether you OUGHT to come in are questions the citizens of Riverside ALONE must decide.

Up to the present time, it has been the policy of the District Board that any community situated in the Central Coastal Plain of Southern California is entitled to share in the benefits of Colorado River water through membership in The Metropolitan Water District, provided that community is so constituted from a legal and engineering standpoint as to be eligible for admission into the District.

Almost immediately after the City of Riverside had taken the official steps to submit to its citizens the proposition of entering the District, our Board and the other officers of the District were requested to come out here to your community and present to you people the facts concerning the operations and problems of our District. It was natural enough that such requests should be made of the District officers, in view of the fact that these officers should be the best possible source of information relative to the affairs and problems of the District.

It was in response to such a request for a presentation of facts that certain officers of the District and members of our Board consented to come to your city on Wednesday of last week and meet a group of Riverside citizens. It was in response to such a request from your constituted municipal officials that Col. S. H. Finley, Secretary of our Board consented to come to a meeting held here two weeks ago. It is in response to such a request, coming to our Board from your duly elected municipal officials, that I am in Riverside this evening.

Originally it had been urged by your municipal representatives that our Board of Directors visit your city as a body. I am sure that every member of the District Board, a District that now represents fourteen cities in Southern California, I say I am sure that every member on our Board would have been delighted to come to your beautiful city.

I am sorry toannounce, however, that the other members of our Board of Directors are not with me here in Riverside this evening.

You know, or should know, what benefits you will secure by becoming a part of the District. If you do not desire to partake of these benefits, it most emphatically is not the purpose of the cities now in the District to urge you to come in. If, having gained a clear understanding of the benefits to be derived by joining the District, you decide

to become a part of our official family, you are assured of a hearty and genuine welcome by the fourteen other vigorous, growing, prosperous Southern California cities now constituting The Metropolitan Water District.

The Metropolitan Water District was organized and is operating for the sole purpose of bringing to the communities of this Central Coastal Plain an urgently needed supply of water from the Colorado River. There are, as I have already stated, fourteen cities now in the District. These cities are Colton and San Bernardino in San Bernardino County; Anaheim, Santa Ana and Fullerton in Orange County; San Marino, Pasadena, Glendale, Burbank, Beverly Hills, Santa Monica, Torrance, Long Beach and Los Angeles in Los Angeles County.

These are the cities now in the Metropolitan Water District. These are cities each one of which is willing to look the facts squarely in the face and admit frankly and freely that they must secure water from the Colorado River in order to maintian their present development, and make possible future growth.

These are the cities that are preparing to invest perhaps more than $200,000,000 in the construction of the greatest water supply system ever built by hand of man. A water supply system that will be the marvel of the civilized world and will bring to the cities who build it a continuous flood of good, pure water to insure forever and safeguard the five billion dollars of wealth now resting upon a receding water table.

These fourteen cities are not so foolish as to think that they are the only communities in Southern California facing a serious water problem. They know, as all well informed persons know, that all Southern California is sitting on top of the same rain barrel - a rain barrel that is rapidly being drained of its precious accumulation of reserve water built up through the long ages before the white man came to this region and launched his intensive development of this wonderful land of sunshine.

These fourteen cities know that our State Water Engineers have drawn our attention to the startling fact that we are now actually pumping from our underground water reserves one hundred and seventy million gallons of water a day MORE than either man or nature is replacing. They know

that this enormous overdraft constantly is increasing. They know that the only way we possibly can stop this overdraft is by the bringing in of a new supply of water from an outside source.

These fourteen cities are not trying to kid themselves and the outside world by saying that we have been passing through a dry cycle but that we soon will be in a wet cycle of years - and then we will get all the water we need from the clouds over this semi-desert country. These cities know that the records clearly reveal that we may very well expect far, far dryer years immediately ahead than we have had during the past thirty years. They know that the records reveal that during the past century there were four periods when far dryer conditions prevailed in this region than we have thus far experienced since the opening of this century.

These cities know that they are not going to solve their vitally important water problems by squabbling over underground water technicalities. They know that there is no community in Southern California that can claim a corner on an undisputed and an inexhaustible water supply. They know that every one of the 29 so-called water basins in this Central Coastal Plain is interdependent. They know that it would be idle and foolish to waste our energy and jeopardize our present wealth by fighting over an empty water-hole.

These cities, at present, all are situated in San Bernardino, Orange and Los Angeles Counties and are preparing, as I have said, to invest more than $200,000,000 in the construction of the great Metropolitan Aqueduct from the Colorado River They know it will be a good investment, an investment that will create wealth many, many fold greater than its cost. They know that, while this original cost will never grow greater, but actually will decrease gradually, the wealth it will sustain and create constantly will be on the increase.

It happens that the route for the aqueduct now favored by the fourteen cities in The Metropolitan Water District lies almost entirely in Riverside County. If this route is used, at least $200,000,000 will be spent during the next eight or nine years right here in Riverside County, right here around the city of Riverside. It will be the greatest outpouring of money ever visited upon any community in the history of the United States of America. Two hundred millions of dollars to be spent in the city of Riverside and the county of Riverside - if the route now favored by The Metropolitan

Water District is used. Other routes considered lie entirely outside of Riverside County.

That, in brief, is the basic water proposition that is today being worked out by The Metropolitan Water District.

What does Riverside want to do about it? The answer to that question, ladies and gentlemen of Riverside, is entirely up to you. You will make your decision at the polls next Tuesday. The results of your decision will be far-reaching and will affect the value of every home and every business enterprise; the results of your decision next Tuesday will affect the pocketbook and the stomach of every wage earner and his family in this community for many, many years to come.

Certain it is, that the cities now in The Metropolitan Water District, and those that will come in in the near future, are going to build their aqueduct and invest their $200,000,000 in a way that will benefit the cities that are paying the bill. They are not particularly interested in playing Santa Claus to the rest of Southern California that is standing on the sidelines. In the same way Riverside, I am quite sure, desires to do that which will best protect its interests and secure for its business men and home-owners a fair share of the benefits that may come this way.

It is my earnest wish that your decision at the polls next week will be one that will bring you all security and success.

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STATEMENT MADE May 5, 1931

The need for more water from a source independent of local uncertainties, demands immediate action. Los Angeles and its metropolitan area beyond all doubt has the most precarious margin of water supply of any similar area throughout the world. The past record of this area reveals a number of periods much more severe than the so-called present "dry spell." Wells constitute the most important source of supply in Southern California. The level of the water in the wells has fallen continuously for many years, the average annual rates varying from two to twelve feet.

Last year a well at Santa Monica dropped fifteen feet At Ontario water is being pumped from 350 feet below the surface Reliable authorities estimate that 50% of the underground supply in Orange County, accumulated through thousands of years, has already been consumed. A year ago surveys showed that in an area of 117 square miles the ground water level was then at or below sea-leve. Salt water is persistently working inland at points to the west and to the south

Numerous wells in high value citrus and urban areas have fallen off alarmingly in production and in some cases have gone completely dry. Mr. Sonderegger, in a recent report, shows that Los Angeles City, due principally to its importation from Owens Valley, has a present surplus; Los Angeles County has an over-draft; and the Santa Ana Basin has a large over-draft. These figures are based upon long-time conditions.

Each succeeding year the demand will increase due to growth. A so-called wet cycle will not materially improve conditions because it must inevitably be followed by a dry cycle, with which we will be much less able to cope than at the present. The rate of lowering of the ground water will increase because the basins narrow as they go down Salt water will move inland in accordance with the inexorable law of nature.

Population and industries will increase unless limited or stopped by inadequate water. Those responsible for the maintaining of water supplies in Southern California are in accord on the necessity for an imported supply from the Colorado River. They further realize that emergency provisions must be made until such a supply is available. Los Angeles is seeking in the Mono Basin, a small increment to its present water supply, of which more than 40% is now being pumped from constantly lowering wells.

Pasadena is looking to the San Gabriel River to tide it over. Spreading works and flood control dams are expected to conserve such rainfall as we may receive. As an extreme emergency we may have to resort to reclamation of sewage, as many inland cities of Southern California are now more or less successfully attempting to do.

Inasmuch as our present shortage will become worse from year to year, the length of time required to build the aqueduct is important. Seven years will be required. Under normal conditions it will be none too soon. Under conditions of continued drought any delay may entail irrecoverable loss far in excess of the cost involved. To delay is to tempt fate and providence and be unfaithful to the responsibility which was assigned to The Metropolitan Water District by an an overwhelming vote of its citizens.

If the construction of the aqueduct is not begun now, our industrial growth and progress must inevitably be retarded. The great financial interests, relying on the judgment of their experts, will not venture capital in an area of known water shortage. Not alone in industry, but in every other category, will confidence in Southern California investments be lacking. Should Southern California delay this construction and be forced to advertise to the world that sewage water had to be used, her high reputation as a wholesome place to live would be ruined.

Failure to provide water when it was needed would sooner or later make necessary the rationing of whatever supplies are available. One season of stringent rationing could easily destroy 50 million dollars worth of residential gardens, in many cases irreplaceable.

In contrast to the consequences of not building this project now, are the benefits to accrue if it is undertaken The activity would first of all engender the confidence of capitalists and investors in the future of Southern California

The expenditure would be in line with the national policy of undertaking public improvements during a depression. Thousands of laborers would directly and indirectly be put to work by the project. The material entering into the construction would awaken industries, transportation, retail business, and their auxiliaries. Real estate would come in

for its share, due to the effect of the activity in restoring confidence and optimism to purchasers. Also, the wide publicity due to the gigantic proportions of the undertaking would bring unprecedented floods of tourists and home-seekers to this area.

An important consideration in undertaking this project immediately is the obligation which Southern California has to our Federal Government. Boulder Dam is going forward with all possible speed. When 4,240,000 k.w.h. of electrical energy are available at the Dam, the District is required to take the power for which it has contracted. Southern California is one of the large benefactors by this project, not only financially, but, in a more important sense, because of the water which will be made available and must be put to use to perfect the rights already established.

The rampant critics in many parts of the United States, jealous of our growth, have prophesied that Southern California will not live up to its obligations. Nevertheless, the Federal Government is going ahead on faith in the metropolitan area of Southern California.

From an economic standpoint the Colorado River aqueduct is one of the most urgently necessary elements in the entire Boulder Canyon Project. Regardless of what other contractors may do, the District must go forward. When the Second Deficiency Bill was pending last year, and the fate of the Boulder Canyon Project was in the balance, Southern California rallied as a man in urging that the project go ahead. The Chamber of Commerce, among others, wired Washington urging the need and interest of Southern California in this project. We must fulfill our obligations and to do so means to start <u>now</u>.

The final cost of the Colorado River aqueduct will be large. However, it will not place upon the people of Southern California, or the average taxpayer, anything but a moderate and temporary increase of his present contribution to the cost of government.

During the construction of the aqueduct when all the obligations must be met from taxes, the rate for District purposes will average only 11¢ on the hundred dollars, which is equivalent to $2.75 on a house and lot worth $5,000. A significant fact was called to my attention a few days ago by

a prominent leader in Los Angeles. He stated that in accordance with the provisions of the Charter of the City of Los Angeles there will be a tax reduction of nine cents on the hundred dollars of assessed valuation beginning next year. This reduction is only slightly less than the average amount which will probably be necessary during construction for the purposes of the district. In other words, as far as the City of Los Angeles is concerned, the present tax rate on the average, will not be increased materially by The Metropolitan Aqueduct project.

Immediately upon completion of the project, large revenues from the sale of water will be made available to the District. An abundant supply of water will stimulate dormant demands of which we now have no conception.

But even without such demands, which on the basis of past knowledge and experience could reasonably be assumed, the project as shown in the recent report by Mr. Sonderegger, will be practically self-sustaining from the beginning of operation. In less than ten years the District's revenues would be in excess of costs, assuming very reasonable rates for the water.

During the past few months, the District has made a very close canvass of the attitude of the people of Southern California towards this project. Everywhere we find the property owner is regarding the Metropolitan Aqueduct as a necessity upon which depends our present stability and future growth. The District was created by an overwhelming majority vote of the people. This initial interest, enthusiasm, and knowledge of the project has not waned, but become more intensified. It is our duty as leaders in our community, charged with the responsibility of providing an adequate water supply, to move forward in accordance with our instructions. We know that a shortage exists which is daily becoming more acute. We know further, that a considerable time must elapse before water from the Colorado River can be made available after construction has once begun. Since the project will be economically beneficial if it is carried out at this time, and disastrous in its consequences if it is not; and since the project is financially feasible and sound and will require only reasonable charges; and since the attitude of those who must ultimately pay for the project is favorable, The Metropolitan Water District has no choice but to proceed with the undertaking by holding a bond election this year.

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STATEMENT TO COMMITTEE of MUNICIPAL LEAGUE

May 6, 1931

Gentlemen:

Mr. Weymouth has transmitted to me, as Chairman of the Board of Directors of The Metropolitan Water District of Southern California, a report covering certain plans, to which we understand you have given some study.

The District appreciates the interest you are showing in the Metropolitan Aqueduct by devoting your time in such investigations as this one now under consideration. You are, in effect traveling the road over which the Directors and Engineers of the District have come during the years that this project has been going ahead. Innumerable plans have been exhaustively studied and checked in arriving at the final selection of the Parker Route as the official route of the District.

However, it is gratifying to know that you are interested in knowing how this or any plan was considered and why it was rejected in the final analysis. A reasonable amount of energy and the expenditure of a certain amount of money in making detailed information available for presentation to large, responsible and constructive groups of citizens is deemed warranted.

Though the Parker Route has been officially chosen by the Directors on the basis of the ample and thorough reports and advices of our engineers and consultants, we take pleasure in discussing at your request these particular plans and schemes. Mr. Weymouth has deemed it reasonable that the District should make a deviation from its intensive activities to consider these matters for your information, that you may be satisfied not only that the best and safest route has been chosen, but also that you may learn from actual contact the able, thorough, and efficient manner in which the work of the District is being conducted.

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THE METROPOLITAN WATER DISTRICT AND THE PRESENT WATER SUPPLY SITUATION IN SOUTHERN CALIFORNIA

May 21, 1931

I am addressing you today at the request of Mr. Bierkamp, Chairman of your committee. He wrote me a letter a few weeks ago asking me to speak on a subject of my own choosing. Of course this meant that I should talk on some phase of the Metropolitan Aqueduct Project. In fact, I have been thinking about this subject so much for the last few years that I almost feel that I know nothing else. When a man gives all of his time to a public project, with all its troubles, criticism, and abuse, without remuneration, he may be said to have an interest in the subject.

The most important phase of the project at the present time, and the one that I have chosen as my topic, is the need for more water in Southern California, and the necessity for getting a new supply from an outside source immediately.

In relation to the foregoing, every one is interested in what the benefits of the undertaking will be and how much it is going to cost.

Last Monday the Supreme Court handed down a decision dismissing the Arizona suit. Every one who has been studying the interests of Southern California constructively, regards this action as a signal victory. While in my own judgment the failure of the Supreme Court to render a decision at this time would not have prevented the Metropolitan Water District from going ahead, nevertheless it did clarify the situation. As such, it was most welcome. The effect of this decision was that the Boulder Canyon Project Act was declared constitutional, and the construction of the Hoover Dam and related projects could proceed without any further threat of interference from Arizona. From the District's point of view, I believe it eliminates all questions relative to water rights.

Those of us who have gone into the water supply situation in Southern California believe the water supply situation in this region to be critical far beyond the popular realization. The need for more water from a source independent of local uncertainties, demands immediate action. Los Angeles and its metropolitan area beyond all doubt has the most precarious margin of water supply of any similar area throughout the world.

At the present time the amount of water pumped by the City of LosAngeles from rapidly lowering wells, is over 100% of the domestic, commercial, and industrial consumption of the city. In other words, the City of Los Angeles, which boasts of having a gravity supply, finds it necessary to pump from wells more water than is used for all city purposes ordinarily classified as domestic consumption.

The past record of this area reveals a number of periods much more severe than the so-called present "dry spell." Wells constitute the most important source of supply in Southern California. The level of the water in the wells has fallen continuously for many years, the average annual rates varying from two to twelve feet.

Last year a well at Santa Monica dropped fifteen feet. At Ontario water is being pumped from 350 feet below the surface. Reliable authorities estimate that 50% of the underground supply in Orange County, accumulated through thousands of years, has already been consumed. A year ago surveys showed that in an area of 117 square miles the ground water level was then at or below sea-level. Salt water is persistently working inland at points to the west and to the south.

Numerous wells in high value citrus and urban areas, have fallen off alarmingly in production and in some cases have gone completely dry. Mr. Sonderegger, in a recent report, shows that Los Angeles City, due principally to its importation from Owens Valley, has a present surplus; Los Angeles County has an over-draft; and the Santa Ana Basin a large over-draft. These figures are based on long-time conditions.

Each succeeding year the demand will increase due to growth. A so-called wet cycle will not materially improve conditions because it must inevitably be followed by a dry cycle, with which we will be much less able to cope than at the present. The rate of lowering of the ground water will increase because the basins narrow as they go down. Salt water will move inland in accordance with the inexorable law of nature.

Population and industries will increase unless limited or stopped by inadequate water. Those responsible for the maintaining of water supplies in Southern

California are in accord on the necessity for an imported supply from the Colorado River. They further realize that emergency provisions must be made until such a supply is available. Los Angeles is seeking in the Mono Basin, a small increment to its present water supply, of which more than 65% is now being pumped from constantly lowering wells. Pasadena is looking to the San Gabriel River to tide it over. Spreading works and flood control dams are expected to conserve such rainfall as we may receive. As an extreme emergency we may have to resort to reclamation of sewage, as many inland cities of Southern California are now more or less successfully attempting to do.

Inasmuch as our present shortage will become worse from year to year, the length of time required to build the aqueduct is important. Seven years will be required. Under normal conditions it will be none too soon. Under conditions of continued drought any delay may entail irrecoverable loss far in excess of the cost involved. To delay is to tempt fate and providence and be unfaithful to the responsibility which was assigned to The Metropolitan Water District by an overwhelming vote of its citizens.

If the construction of the aqueduct is not begun now, our industrial growth and progress must inevitably be retarded. The great financial interests, relying on the judgment of their experts, will not venture capital in an area of known water shortage. Not alone in industry, but in every other category, will confidence in Southern California investments be lacking. Should Southern California delay this construction and be forced to advertise to the world that sewage water had to be used, her high reputation as a wholesome place to live would be ruined.

Failure to provide water when it was needed would sooner or later make necessary the rationing of whatever supplies are available. One season of stringent rationing could easily destroy 50 million dollars worth of residential gardens, in many cases irreplaceable.

In contrast to the consequences of not building this project now, are the benefits to accrue if it is undertaken. The activity would first of all engender confidence of capitalists and investors in the future of Southern California.

The expenditure would be in line with the national policy of undertaking public improvements during a depression. Thousands of laborers would directly and indirectly be put to work by the project. The material entering into the construction would awaken industries, transportation, retail business, and their auxiliaries. Real estate would come in for its share, due to the effect of the activity in restoring confidence and optimism to the purchasers. Also, the wide publicity due to the gigantic proportions of the undertaking would bring unprecedented floods of tourists and home-seekers to this area.

An important consideration in undertaking this project immediately is the obligation which Southern California has to our Federal Government. Boulder Dam is going forward with all possible speed. When 4,240,000,000 k.w.h. of electrical energy are available at the Dam, the District is required to take the power for which it has contracted. Southern California is one of the large benefactors by this project, not only financially, but, in a more important sense, because of the water which will be made available and must be put to use to perfect the rights already established.

The rampant critics in many parts of the United States, jealous of our growth, have prophesied that Southern California will not live up to its obligations. Nevertheless, the Federal Government is going ahead on faith in the metropolitan area of Southern California.

From an economic standpoint the Colorado River aqueduct is one of the most urgently necessary elements in the entire Boulder Canyon Project. Regardless of what other contractors may do, the District must go forward. When the Second Deficiency Bill was pending last year, and the fate of the Boulder Canyon Project was in the balance, Southern California rallied as a man in urging that the project go ahead. The Chamber of Commerce, among others, wired Washington urging the need and interest of Southern California in this project. We must fulfill our obligation, and to do so means to start <u>now.</u>

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During the construction period when all the obligations must be met from taxes, the rate for District purposes will average only 11¢ on the hundred dollars, which is equivalent to $2.75 on a house and lot worth $5,000. A significant fact was called bo my attention a few days ago by a prominent leader in Los Angeles. He stated that in accordance with the provisions of the Charter of the City of Los Angeles, there will be a tax reduction of nine cents on the hundred dollars of assessed valuation beginning next year. This reduction is only slightly less than the average amount which will probably be necessary during construction for the purposes of the District. In other words, as far as the City of Los Angeles is concerned, the present tax rate on the average, will not be increased materially by the Metropolitan Aqueduct project. Immediately upon completion of the project, large revenues from the sale of water will stimulate dormant demands of which we now have no conception.

But even without such demands, which on the basis of past knowledge and experience could reasonably be assumed, the project as shown in the recent report by Mr. Sonderegger, will be practically self-sustaining from the beginning of operation. In less than ten years the District's revenues would be in excess of costs, assuming very reasonable rates for the water.

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BEFORE THE LOS ANGELES CHAMBER OF COMMERCE

July 14, 1931

We are here for a very serious purpose. Again it is the pleasure and privilege of the Board of Directors of The Metropolitan WaterDistrict of Southern California to take the Chamber of Commerce into our confidence in the responsibility with which we are publicly charged. The Metropolitan Directors will be commended or condemned according to the manner in which we provided Southern California with that essential of life -- water.

The Board of Directors of the District, in meeting its responsibility, must depend on the ability and skill of our technical advisors. Having chosen the best men anywhere available, the Directors are assured, and have repeatedly expressed such assurance, that these men will bring in this needed water in the efficient manner for which Southern California is noted.

There is still another sense in which we must share our responsibility. In the great public enterprises, particularly those in which a number of communities are cooperating, to the untied benefit of a district, there are many who, either selfishly or constructively, are actively concerned. Unless these interests can be consolidated in a unified and harmonious program, conflicts occur which destroy efficiency. The Directors of the District, by their presence here today, express their confidence that the Los Angeles Chamber of Commerce, after its months and years of studying this problem, is willing to take its proper share of the responsibility in the building of the Colorado River Aqueduct.

I said a moment ago that we are here for a serious purpose.

The Metropolitan Directors, after several years of unremitting work, have arrived at certain definite conclusions.

We are convinced that Southern California must have this water from the Colorado River; otherwise, we will suffer the dire disaster of a water shortage affecting the interests of over two million people.

Decisions that affect millions of persons, and billions of wealth, are serious decisions.

The construction of the aqueduct would be justified, in our opinion, if it were only in the nature of insurance on our land and buildings.

But we need the water badly!

You have all heard, and will probably hear again today, the story of dropping water levels, of threatened orchards, of industries already seeking in vain for an assured water supply, and the eternal menace of the salt water moving in and in! These are facts that we as individuals can verify.

For the larger technical aspects, we must call upon our experts to give us a sound, conservative analysis. That - ! is the purpose and business of this meeting.

A fundamental consideration in building this aqueduct is the provision that must be made for continued growth. The estimates of the District's engineers have been characterized by conservatism. For instance, their prediction as to the rate of population growth is only one-half that of the statisticians of the Los Angeles Chamber of Commerce.

Mr. Goodrich, the noted city planner, who in 1912 predicted that Los Angeles would have more than a million people by 1930, is reported as saying that we will continue during the next ten years our present rate of growth. The estimates of the District are less than one-half his prediction.

Mr. Goodrich also is reported to have said that the inadequate Los Angeles water supply is a drawback to' local growth.

We must not overlook the costly experience of almost every large city, caused by underestimating its water requirements.

In presenting its analysis of the aqueduct project here today, the District is pleased to have included as the guests of the Chamber of Commerce, members of several other outstanding civic organizations. They will, I believe, be interested and enlightened to hear the presentation, and the discussion between the District and the members of the Chamber.

Our Chief Engineer, Mr. Weymouth, and his assistants and consultants, will deal with the engineering and economic phases. He will be followed by our General Counsel, Mr. Mathews, who will discuss the legal aspects of the situation.

I am sure they will present their studies and conclusions very concisely and clearly.

Long and careful study has been given to this aqueduct project by special committees and the Directors of this Chamber; the time for action has now arrived.

Let me again express the appreciation of the Board of Directors of The Metropolitan WaterDistrict of Southern California for the cooperation of this Chamber of Commerce in all the preliminary studies - and also for the anticipated support in bringing Colorado River water to the Central Coastal plain of Southern California.

Mr. Weymouth has laid the conclusions of his studies and investigations before the Board of Directors of The Metropolitan Water District, with full explanation of every detail, and the members of the Board, to a man, after careful consideration of the subject, unanimously endorse and approve his conclusions and recommendations regarding the aqueduct project.

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BEFORE THE BOARD OF DIRECTORS

of the

LOS ANGELES CHAMBER OF COMMERCE

July 30, 1931

The District, as you all know, has fixed the date of its bond election for September 29. The decision was made after due consideration of our responsibility in the matter. Today, at your invitation, we are here to solicit your support in assisting to make this project a success just as you men put your shoulder to the wheel twenty-four years ago to build the Owens Valley aqueduct.

The situations then and now are almost identical. We are now in a depression with our banks piled with money. While the panic of 1907, in which over thirty California banks failed, had not yet hit Southern California with its full force when the bonds were voted, its coming was clearly foreseen in the increasing tightness of money. The opposition used the same arguments based on the quality of the water, the cost of the enterprise, the need for water, the use of local supplies, and so on. There was a strong agitation for more engineering boards of review. In an editorial of the Los Angeles Times of May 9, 1907, the following occurs: "If the work of the consulting board is to be reviewed by another engineer, as good reason exists for a review of his review, and so on until all available engineers shall have had their say -- and fees."

The District feels that having selected the best men anywhere available, we must place confidence in their professional ability and integrity. Our Chief Engineer, Mr. F. E. Weymouth, is known throughout the world for his work. Beginning with the Metropolitan Water District of Massachusetts thirty-five years ago, he has been identified with railroad and irrigation work in South America and Mexico, and with the diversified and enormous projects of the United States Reclamation Service, of which he was for six years Chief of Construction, and four years Chief Engineer. Over forty dams, some of which were the largest of their kind, stand today as records of efficient construction and models of design, have been built under his immediate responsibility. These dams were built at 5% less than their estimated cost. His comprehensive studies and reports on the Colorado River development have successfully withstood the most vicious technical and political attacks to which engineering enterprises have ever been

subjected. Mr. Weymouth's experience was thoroughly checked before he was employed by the District.

Mr. Hinds, his chief assistant, is of the same high caliber. As an expert of hydraulic design, his work is internationally known, having won him the Norman Medal for the greatest original contribution to engineering in literature in 1926. The Soviet Government, which places a premium on ability, has made him repeated offers on extraordinary terms.

In the department of electrical and mechanical design, Mr. Gaylord has no superior in the United States. He has, in association with some of the greatest power concerns and with the United States Government, done some of the greatest work in long distance electrical transmission and large pump design in this country.

The field surveys and location work have been under the direction of Mr. J. B. Bond. He has probably had larger experience on canal location than any other person in the United States today. His background of experience ranges from flood control work in China, to investigations for gigantic reclamation projects in Mexico.

Mr. Munn, our Chief of Construction, has for over forty years been building projects throughout the United States. Before coming with the District he built the new supply line for the East Bay Municipal Utility District at Oakland, at 10% less than the estimated cost, which is putting that area on the industrial map, and which is now, by a temporary arrangement, enabling San Francisco to carry on.

Anyone who will take the time to investigate the District staff will find the ablest group of men for the purpose ever gathered together anywhere.

The members of the Engineering Board of Review were chosen from among the forty-four best qualified consultants in America. Mr. Merriman, the Chairman of that Board is now, and has been for many years, the active engineering head of the New York Water System, which supplies the needs of seven million people living on an island, from sources hundreds of miles away. Mr. Merriman and his associates have twice rendered comprehensive reports to our Directors and have been supplied with complete information as the work progressed.

Mr. Sonderegger, who for over twenty-five years has studied and recorded water supply conditions in Southern California, has prepared accurate and convincing reports on the need and use of water which substantiate the independent reports of the District and state engineers on the same subject.

In addition, the District has employed Mr. Lynch, who, on the basis of years of research, has prepared a report on historical climatic conditions in Southern California which further emphasizes the necessity of building the aqueduct as soon as possible.

I have presented this brief statement of our engineering organization to impress you with the fact that the District has been thorough, cautious, and exacting in the selection of its men. Having gotten the best men available anywhere, we feel justified in placing great reliance in them. No other engineers without the same background and contact with the problems could be expected to render an equally competent opinion. The District, and the men themselves, welcome your investigation of their records in the same thorough manner employed by the District. I will now let the engineers speak of the aqueduct project in their own way.

Gentlemen of the Chamber of Commerce, The Metropolitan Water District employed these men because they had confidence in their ability, integrity and fitness for the positions to be filled, and time and more intimate acquaintance have served to strengthen and confirm this confidence, and now, at this crucial time in the affairs of the District, when action is demanded by the serious problems to be solved and by the great public interests to be protected, we ask that you also show confidence in these men and in the results of their long and difficult labors for the District.

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STATEMENT of September 12, 1931

The problem of water supply is the problem of every one living in Southern California. Whether you run a steel mill, a department store, an orange grove, or live in your own home, you are concerned as to whether the system that serves you has a sufficient supply of water. The laborer's job depends just as much as the banker's investments on an unfailing fawcett. But it is not sufficient that there be just enough. There must also be a reserve which will take care of the years of drought when the supply falls away and to take care of more people and more industries whose use increases every year. That is the kernel of the entire Colorado River Aqueduct problem and the measure of its importance.

At present we do not have an adequate supply. The wet years to a certain extent make up for the dry ones. But even if the wet years and dry years are balanced together, we are still using, here in Southern California, more water than comes to us on the average from all sources. The wells of Orange County dropping continually lower every year for many years, is ample proof of the fact. Such a record means inevitable disaster. It means that in the near future we are going to find our supplies rationed and every economic activity from farming to industry fighting for its existence. The higher basin will go dry first; the areas along the coast will be the first to get the salt water which is now moving in on them. Cities and farms, industry and agriculture, domestic and commercial users, will be in bitter contests for the fresh water they must have.

That is a sad picture, but it is an inevitable eventuality without the water which the Colorado River Aqueduct will bring to Southern California. It is true in Los Angeles just the same as in Santa Ana. The pioneers in this undertaking have had these facts in mind and realized that the only solution was one which considered the Coastal Plain as a unit. They knew with true vision that the problem must be solved by allworking together for the benefit of all. That understanding brought into existence The Metropolitan Water District of Southern California, and after years of hard work now brings before you for approval a sound economic plan for bringing to us the water which we cannot do without.

If disaster is to be avoided, the aqueduct must be started now. Drier years and longer droughts than any which have occurred in the past with suffering and loss,

are in store for us. In the cyclic turns of history they will come again. With two and a half million people, and five billions of wealth depending on an adequate water supply, we are in a more critical situation than ever before, and unfortunately less prepared to meet a shortage.

The benefits to follow from the building of the aqueduct are obvious. With the fear of drought removed, we can grow and expand to our splendid natural limits. Industries will come in ever increasing numbers to take advantage of our favorable working conditions, our abundant resources, and the markets which are opening out on every hand. More industries mean more people and the influence of numbers permeates throughout to the advantage of every ownership and every economic activity. I am confident that with the adequate supply from the Colorado River, we shall see a return to the soil movement. Sooner or later people will realize that such a movement under certain conditions, is a permanent solution of the unemployment problem. Labor is more secure and industry more substantially founded where the factory laborer is able to supplement and fortify his economic security by living on an intensively cultivated garden acre. This consideration, while subservient to the essential fact that we must have the water, is nevertheless an important one.

The sentiment in favor of voting the $220,000,000 in bonds at this time is growing at a tremendous rate. Leaders and organizations representing almost every creed, class, and interest have endorsed the proposal. It is rare that expenditures for such an economic necessity as water supply, can be coordinated with the humanitarian need for the relief of depression and unemployment. This amount of money distributed into the economic system of all Southern California and finding its way to the farmer, the laborer, the clerk, and the business man, means that we will lead the Nation in the climb to prosperity.

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February 22, 1932

VAN NUYS IS 21 YEARS OLD TODAY.

The "News" has asked me for a resume of its history and my personal opinion as to its future.

When a son or daughter reaches that magic 21st birthday, it is natural for us to indulge in some thoughts of the past and to think about their future, and in the same manner we deem it entirely pardonable to do the same with respect to our City of Van Nuys upon its becoming of age.

Many years ago I originated the slogan "The Town That Was Started Right," and have endeavored to have it lived up to always. Van Nuys may be said to have sprung, on its maternal side, from the rich and fertile San Fernando Valley whose family now includes our sister communities of North Hollywood, San Fernando, Reseda, North Los Angeles, Canoga Park and Chatsworth Park, and on the paternal side from a group of men whose names stand out among the progressive and far-seeing people of Southern California. Through these parents Van Nuys was endowed at birth with a notable combination background of fruitfulness and constructiveness.

Having been brought into existence, the care and nourishment to the self supporting stage fell upon me. Continuing the comparison with a child, we may say that in its early years the infant city, precocious and lusty as it was, required eternally vigilant care. It required nursing, a proper financial and development diet, including the feeding of productive industries fast enough to create a natural, healthy growth, but not so fast as to induce community indigestion. As all infants do, it had to be litterally supported during its early years and until it could begin to toddle and then walk.

Dropping the analogy, those early years were intense and trying with many painful problems to be solved. Practically every industry had to be subsidized, educational facilities had to be provided, adequate transportation and a dependable water supply had to be secured and opportunities to work provided for the growing population.

It is with pardonable pride that I reminisce as to the part I had in establishing the symmetrical platting of the Townsite so that its arterial life was fed to the common Boulevard center; in the planting of miles and miles of trees that now make our streets delightful; in the comprehensive zoning restrictions (the first of its kind to be established on such a large scale in the State) which provide for

orderly and protected expansion and improvement of homes, businesses and industries, and in guiding and nurturing the community during its growing years, attracting and aiding many industries and activities such as the poultry business, factories, banks and the like, to the end that, when it had reached the age when it could go "on its own" it was pre-eminent among its sister communities for healthy growth and stability.

Its spiritual growth received the same careful attention as its material support. Gifts, bonuses and free lots were given to representative Protestant and Catholic congregations alike. Every conveyance contained a stringent restriction against the manufacture, sale or distribution of intoxicating liquors so that Van Nuys was established as a "dry" town long before National prohibition.

After a sane and healthy youth, Van Nuys became impatient with the conservative, thrifty, "country" ways in which it had been reared and acquired flashy "city" ideas in the form of too many paved streets, too many lot subdivisions, special assessments, expanding industries inadequately financed and too many expensive tastes both public and private. The same inevitable reaction occurred as when our human children find they must, for financial reasons, forsake their "collegiate" ways and begin to earn their own livings by hard work.

So much for reminiscing. Our Child Community has grown up, and we may with good reason look into the future with confidence and hope.

Our Van Nuys Community is healthy in body, mind and spirit. No community can boast of a higher type of citizenry. Its school, church and community activities are adequately and well developed. It is richly endowed with material needs. It has learned the fallacy of speculative subdivision schemes and realizes that it possesses in its GARDEN ACRES an asset that transcends in stability, healthful growth and financial independence all of the visionary allurements of speculation. Dame Nature has endowed and fitted us pre-eminently for production, not for speculation.

With pardonable pride in past accomplishments, proper acknowledgement of recent mistakes, confidence in ourselves and faith in righteousness, let us now drop all factional differences and work together to the destiny for which Nature has so manifestly fitted us.

OUR FUTURE LIES IN RIGHT LIVING, THRIFT AND PRODUCTION.

* * * * *

STATEMENT

1932

Humanity always hungers for the desert areas with their curative powers and the joys of golden sunshine.

Sturdy pioneers have charted the water holes upon these deserts; we have followed them and created a metropolitan empire rivaling Babylonia in its richest days.

Our foundations rest upon the water tables.

We will not leave the 'pitcher broken at the well', nor the water hole dried up. We will not violate the rich traditions of the West.

Wherefore, upon assuming our duties as builders of the aqueduct to bring the waters of the Colorado River to the Coastal Plain about Los Angeles, we all must realize the full responsibility of the present and future ages that rests upon our shoulders.

Commercial and social structures will be based upon the foundation that we now construct under them, and upon the permanancy of our work, the security of this splendid civilization in arid America will rest.

Public undertakings are too frequently made into a football contest for office, with pulling and hauling of selfish interests for gain.

In addition to the log rolling for the mediocre jobs and contracts, The Metropolitan Water District will sontact, and unfortunately compete in some measure with selfish commercial interests, which fact alone will cause thinking men to pause and plan as to the best method of selecting the best men for the key positions in this great undertaking.

If I can succeed in devising a working plan by which we may come to harmonious action in selecting the right men for the key positions of this undertaking for our children and posterity, and which plan will once and for all let the world know that the aqueduct of the Colorado River will be built upon the merit plan, and not upon the political spoils system, I will consider that I have, in no small degree, assured the success of the project and accomplished largely the main purpose that induced me to accept a responsibility of this kind at this period.

Those to whom we are indebted for the inheritance of this magnificent prosperous city through the construction of the Owens River Aqueduct succeeded because they conquered the political spoils system at the start.

The construction of the Colorado River Aqueduct is more than an ordinary undertaking, and at vital points, it will be at times in direct collission with some private selfish interests, and we should therefore examine the foundation of our organization and determine here and now, once and for all, whether the appointment of men to key positions shall be under the merit plan or the political spoils system. We must have no hesitancy to draft the men best qualified to fill any positions for The Metropolitan Water District. We give our time for the good of all and it should be a great honor to be of service in so important a matter.

In the future, in order to prevent wrong statements of facts, I feel we should require recommendations of those qualified to fill positions of this organization to be given in writing and signed by the party making them so they may become a part of these permanent records for public review.

We may need a man in the near future capable of meeting the public and taking permanent charge of The Metropolitan District office, and if there is no objection, the Chair will appoint three members of this Board to investigate the duties of this office in conjunction with the president, and to receive written suggestions from the other Directors concerning their ideas of the qualifications of the man to successfully fill the position. These written suggestions, together with the information this Committee may be able to get together to be used as a basis for the preparation of a "Who's Who" so we can all be on the lookout for the best man for the place.

When the qualifications are arrived at, a written copy will be mailed to all directors so we will be more able to intelligently look for these men who are going to be closely associated with the Executive activities of this Board. This Committee, after arriving at the qualifications, will investigate and suggest the salary to be paid.

Anyone submitting names of those qualified, in their opinion, to fill such positions, must do so in writing, giving all information possible.

The Committee will submit the names of the three best qualified with their written qualifications and recommendations for open discussion by all the directors. A stenographic report of this discussion shall be made and filed with the other recommendations.

At the meeting next following this discussion, this Committee, after taking into consideration the additional facts developed by such discussion, will there submit with the written reasons the one they consider best qualified for a final vote. Los Angeles delegates will vote last, in order that their 50% vote may be used to refer the matter back to the Committee if no pronounced general sentiment from the outside towns has developed in favor of the recommendation, or the Los Angeles directors consider the search for the right party should continue further, with the hope that a more unanimous opinion may be reached later.

I consider the harmony and much of the success of the Department of Water and Power of the City of Los Angeles due to unity of action of the Commissioners of Water and Power. I doubt if there were ever five men of as strong personalities whose experiences have been as different, who have fought their ways together until they could vote as a solid unit on as many vital problems affecting the welfare of a great city as the members of our Board.

Knowing the sincerity of endeavor, we have learned to respect the opinion of each other. We have held in abeyance decisions which could be postponed without injury to these projects, thereby respecting the minority wishes until we visualized correctly the common objectives from our different viewpoints.

This policy is now being emphasized by our National Government in reference to Arizona in connection with the Seven States Compact. And the Metropolitan Water District of Southern California can do no finer or more constructive thing than to emulate these examples wherever possible in all its important steps forward.

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STATEMENT OF JANUARY 8, 1932

When the citizens of the thirteen cities in The Metropolitan Water District authorized by the overwhelming vote of 5 to 1 the $220,000,000 aqueduct bond issue to bring in Colorado River water, our District Board of Directors interpreted this decisive vote as a command to push forward this great project with all possible speed and diligence. In approving the aqueduct bonds, our people made it plain that they recognized, first, the imperative need for Colorado River water and, second, the opportunity to give constructive employment to thousands of families desperately in need of work and food.

Engineers with the District were prepared to push forward the first stages of the great aqueduct project the day after the bonds were voted. We recognized, of course, the necessity of having these bonds validated by due process of court action, but we had hoped that this procedure might be carried out within a short time.

However, it now appears that there are a few persons in the District who are seeking to use every technical means at their command to delay court action in validating the bonds. If those persons persist in their obstructive tactics, there will be a further delay of several months.

Every possible effort is being made by the District to start work on the aqueduct and thus provide employment for thousands of men at this time, but the District, of course, cannot provide funds for payrolls while obstructive lawsuits stand in the way.

The District will continue to carry forward preliminary work with its present organization, somewhat reduced. But it will be impossible to receive any additional applications for work as long as obstructive litigation stands in the way.

The public is entitled to know why this work is not going forward and to know, also, that our District organization is making every effort to bring the suits to a satisfactory conclusion so we may launch work on the aqueduct as soon as money has been made available.

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Before the Members of the

BOARD OF CONSULTING ENGINEERS and the

BOARD OF DIRECTORS OF THE METROPOLITAN WATER DISTRICT

OF SOUTHERN CALIFORNIA

April 4, 1932

In times like these we are apt to forget our history and have our vision of the future obscured by our present troubles. Yet it is very heartening to take the census of the United States Government concerning the Metropolitan Area of Los Angeles, which reveals its present population as 2,318,000. Some of the men here can remember when Los Angeles was a sleepy little Mexican pueblo village, having in the neighborhood of 10,000 people -- only about 50 years ago.

At that time there were half a dozen young giant cities starting here in the West, competing in population, growth and industry, forging ahead, and challenging one another as to growth and development. Enumerating them today you have, in addition to Los Angeles, San Francisco, Oakland, Portland, Seattle, Salt Lake City, and Denver. The metropolitan districts of all of them combined is less than the population of the metropolitan district of Los Angeles. Now, those are very significant facts.

It is also a very significant fact that from 1900 to 1910 one person in every eight that located in the eleven Western states located in Southern California; from 1910 to 1920, every fifth person; in 1920 to 1930, almost every other person that located in this Western country located in Southern California. Now this metropolitan district of Los Angeles has a greater population than the states of Oregon, Montana, Wyoming, Nevada and Arizona. The same attractions that accelerated this trend of settlement are just as powerful today as they ever were, and there is a great deal more known about them!

Aqueducts are not built for the present. The aqueduct built by the Romans 2000 years ago are still being used by the city of Rome. Aqueducts are built for the influx of great migrations, the same as they are built for the troughs of depressions. And most of all, they are built for the dry cycles, the same as they are built for the bountiful rainfall years. And yet we haven't had rain for over six weeks and if it continues another week the rainfall crops, the grain and hay of this section, will be

cut possibly to one-third, and the pastures will be dried up within six to eight weeks earlier than we have normally been led to expect they would be.

We find through trips and contacts in the East that the people who have had their assets frozen are figuring on making another start, and find that they are not going to start there. They are going to start in Southern California. We find that people who have liquid assets, who have been waiting for this thing to reach bottom, are going to reinvest here. Such a party came to California on the boat I was on. I understand that during the War he employed from 30,000 to 40,000 people. He has his assets in Government bonds. He is out here looking over our investments, and our investments are such as to attract people when they consider the possibilities of our growth.

I want to say to you men, the Board of Consulting Engineers, that every major step of this Metropolitan Water District has been unanimously agreed upon. When we selected F. E. Weymouth as Chief Engineer, he was unanimously agreed upon. When we selected the first Board of Consulting Engineers, they were reported by the Engineering Committee and unanimously agreed upon. When we selected the present Board that you men comprise, it was by unanimous agreement after the most searching consideration of the names of men who were qualified for this job. Now we are giving our time - there is not a Director here who draws a dollar - our Treasurer, Mr. Toll, Mr. Dave Pontius - do not draw a dollar.

I feel it is rather a presumption to say these things to you men, yet I know that this message that is intended to be left springs from the minds and hearts of these men, and someone would think me derelict in my duty if I did not point out some of these things that have actuated us in carrying out this enterprise.

I am going to call on Mr. Merriman for a few remarks.

(Later)

I wish to say that all the facilities of The Metropolitan Water District, the Engineering Department, and everything connected with us here, is at your disposal, and if there is anything you need that is not available, if you will let your wants be known we will see that they are placed at your disposal.

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BEFORE THE BOARD OF DIRECTORS OF THE

RECONSTRUCTION FINANCE CORPORATION

July, 1932

The Metropolitan Water District of Southern California has filed with your honorable body an application for $99,750,000. As Chairman of the Board of Directors of that organization, I am pleased to present to you Mr. John G. Bullock, Chairman of our Committee on Bonds, Mr. W. L. Honnold, Chairman of our Committee on Engineering, Mr. H. L. Heffner, Chairman of our Committee on Organization, Mr. D.W. Pontius, our Controller, Mr. Eisner of our Finance Committee, and our Secretary, Colonel S. H. Finley. These men of large affairs are donating their valuable time and great abilities on behalf of this project for providing their communities with an adequate water supply. Let me also introduce our General Manager and Chief Engineer, Mr. F. E. Weymouth, and Mr. James H. Howard, our General Counsel.

In making this application, we are convinced that we can show that the Colorado River aqueduct project will relieve unemployment on a nation wide scale; that it is economically sound, self-liquidating, and has ample security to offer, and will relieve one of the largest and fastest growing metropolitan areas of the nation of a menacing water shortage.

This project, which will expend $220,000 in six years, is now standing idle with employable people on every hand only because conditions make it impossible to obtain money. Our people want work. They are losing their homes; they haven't the food and other necessities of life for themselves and their families. There is a growing spirit of social unrest which unless something is done may burst forth with a force that will be uncontrollable.

To the great mass of unemployed in Southern California are being added tens of thousands from all parts of the United States seeking our more equitable climate. They come be freight trains, hitch-hiking, walking, and in fleets of automobiles. Many of them are being furnished with free gasoline by the towns along the way in order to move them on to Southern California. More than a thousand a day arrived the past winter, adding greatly to the almost unbearable burden of providing for the unemployed.

More menacing than the threat of great masses of enemployed is the danger of exhausting our water supply. In all the world there exists no community as large or as densely populated as that to be served by the Colorado River aqueduct, except it be located on a flowing stream or on the shore line of a fresh water lake. Every other equally large metropolitan area in the United States

has at least twice as much rainfall, the greater part of which comes during the summer season which, with us, is absolutely dry.

Such climatic conditions would dry up the rivers of other parts of the United States, causing great loss of life and property and devestating epidemics. It is against these desert conditions that we are seeking to protect ourselves. In the past a large part of our water supply has come from wells. These supplies are failing. Salt water from the ocean is moving inland to poison the supplies remaining in the ground. It is as though a saline creeping paralysis is poisoning our life's blood and destroying our growth and development. Our financial structure is resting on a vanishing water supply. Confronted with growing unrest within our cities, and the fear of a succession of dry years which will exhaust our remaining water reserves, we have come to you for help. We do this, not as advocates of paternalism, but because it is our only chance of starting this undertaking.

Breifly, the project will consist of 226 miles of aqueduct with an additional 160 miles of distributing mains. The water will be diverted from the Colorado River, carried across desert plains, lifted through the coastal mountains and delivered into the storage reservoirs close by our cities, homes, industries and gardens.

A contract has been entered into with the United States Government to store and deliver the water allotted to us. The power generated at Hoover Dam will operate the pumps. The District, following the completion of the Dam, is obligated, under binding contract with the United States Government, to take and pay for $2,500,000 worth of power annually. In order to be able to use the power when it is delivered to us, it is imperative that the aqueduct be started immediately.

We have already demonstrated our ability to handle a project of this magnitude. Twenty-five years ago the Los Angeles aqueduct was started and built under similar conditions of depression. It stands for those who investigate a monument of efficiency in public construction. That project represented a heavier financial burden on our people than the one we are here presenting to you. It did not have the security nor the prospect of increased wealth that are back of the Colorado River Aqueduct. The water brought down from the mountains 250 miles away, twenty-five years ago, has been put to use. Many of the same men who built that great water line are behind this new and greater one.

We have come to you with our dire problems of unemployment and of water supply. For nine years our engineering work has been carried on, long before the necessity of relief legislation was thought of. The work has been checked and rechecked by independent boards of the most outstanding engineers in the country. Legal obstacles are believed to have been all removed. A great part of our rights of way have been secured. Contracts for the furnishing of the power needed for construction of the aqueduct have been executed. Plans and specifications are now ready to be submitted to the contractors. We are prepared to supply you with full facts and data as to every aspect of the job.

Had we known nine years ago when we started the surveys and plans to bring Colorado River water to Southern California all we know today, we could not have planned or timed the starting of the construction of this aqueduct to fit better the present unemployment situation or to take advantage of the low price of construction materials which now exists.

The construction of the aqueduct is well adapted to relieve unemployment. The work is not concentrated in any one place, but distributed over approximately 400 miles of line. The only limitation on the number of men that can be put to work is the time required to build the various parts of the project and the economics of efficient organization. Thousands of workers will be needed from practically every occupation, trade and profession. There will be required over $17,000,000 of construction equipment to be supplied from almost every industrial center in the nation. In addition to this construction equipment, over forty-nine thousand carloads of steel, iron, lumber, copper, aluminum, powder and other materials will be needed, exclusive of sand and gravel and similar materials available along the aqueduct route. These 49,000 cars of materials will have to be transported from many parts of the nation with great benefits to railroads and industry.

The money which will be paid directly to the thousands of needy workers and the many thousands more in industry and the carrier systems throughout the country, will flow along the normal channels of trade to the merchants, to wholesalers, and to farmers everywhere, and will add its force to the restoring of commodity prices. The ramifications of the benefits can best be appreciated by taking into account the quickness with which the work

can be started, and its magnitude.

The project is in the hands of our most capable businessmen. The Directors are chosen from among the ablest and most successful men of the thirteen associated cities, and serve without compensation. The engineers and other employees have been selected solely on their merit. The project received the moral endorsement of the people who will have to pay the bill, when they voted by a majority of five to one, to mortgage their homes and business in these trying times, for $220,000,000. This amount of bonds is well within the limit of the District's ability to pay, and its bonding capacity as established by law. The money expended can all be returned by the sale of the much needed water, which the aqueduct will deliver. A comparatively small increase in the present low water rates has been estimated to be enough to pay all the costs, including operation, maintenance and capital charges. However, the bonds are a lien on all the property of the District, and are guaranteed by the District's unlimited taxing power.

We urge you in considering our application, to bear in mind that Southern California is not an area in competition with the balance of the nation. Our warm valleys are the winter gardens of the nation. Our industry and commerce are predicated on the local market and the trade with the countries bordering the Pacific Ocean. As a recreational and health center, having a mild climate with ocean, valley, mountain, and desert attractions in such close proximity it draws tourists and residents from everywhere.

With a dependable water supply, this area will continue to develop its natural advantages, which will result in popularizing American vacations, and keep at home a great volume of American gold now being expended in Europe.

It is important that the loan granted to the District be the full amount of $99,750,000. This amount will provide funds for approximately three years' work. Unless funds are provided for at least three years, the cost of the project would be materially increased. Some of the contracts will be in progress for five or six years. With inadequate or limited finances, competent bidders would increase their provisions for contingencies to cover the possibility of the work being stopped for lack of funds. Once started, the contracts let, and the equipment purchased, great loss would result if the work were inter-

rupted. Funds to the amount applied for would eliminate to a reasonable degree the uncertainty of present conditions and permit the District to continue its financing in a normal way after this loan has been exhausted.

In conclusion, we appeal to you men as representatives of the Government administering a relief measure, to furnish us with the medium of exchange under your control so that this great wealth-creating, self-liquidating activity of both capital and labor can proceed.

We wish to emphasize the fact that our desert cities must have additional water and that we are already late in starting our aqueduct in order to have it completed in time to receive and use our power under Federal contract from Hoover Dam. This aqueduct project, involving the expenditure of $220,000,000, is prepared to give immediate employment to a great number of workers. It is economically sound, self-liquidating, and will return to the Reconstruction Finance Corporation every dollar advanced, with interest.

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Before the

BOULDER DAM ASSOCIATION and the

COLORADO RIVER AQUEDUCT ASSOCIATION

1932

As Chairman of the Board of Directors of The Metropolitan Water District of Southern California, I wish to extend greetings to you on behalf of the Board.

To us of the District this meeting here today arouses mixed emotions - feelings of joy and thanksgiving, strognly tinged with a very genuine sorrow.

We are glad because the very nature of the gathering - the disbanding of two great organizations - signalizes the completion of a long and arduous job, the realization of the dream of more than a decade.

We are sad because there is always a somber quality to the ceremonies that mark the closing of the books of such a worthy enterprise, even when a difficult goal has been reached with flying colors.

The Metropolitan Water District's debt of gratitude to the Boulder Dam Association and the Colorado River Aqueduct Association is immeasurable. We realize most clearly that if it were not for the consistent and unselfish efforts put forth by these two groups, our District would still be a dream, a dream not likely to be realized.

Pioneers in the general agitation for Colorado River development celebrated, on September 29 of last year, a fine victory which signalized a huge step toward the realization of the dream of more than a decade.

It was the overwhelming 5-to-1 vote cast by citizens of the thirteen Southern California cities, which have joined together in The Metropolitan Water District, in favor of a $220,000,000 bond issue for the building of an Aqueduct from the Colorado River.

In casting that amazing vote, citizens of the District demonstrated forcibly how indelibly is etched in their minds the need of an adequate water supply in this semi-arid region.

And that need, gentlemen, is just as pressing and just as desperate as it ever was. The widespread acclaim

which has hailed the rainfall which we have enjoyed this winter reveals a general understanding of this situation.

This general understanding of a serious need was, of course, the primary reason for the overwhelming vote of approval given the bonds by the peoply of Southern California. Action - quick action - was demanded in building the aqueduct.

A secondary reason, almost as important as the first in the minds of many, was the fact that jobs for several thousand citizens of the District would be provided on the project over a construction period of six or seven years. It was generally realized that much poverty, suffering and hardship would be relieved by the opening of this field of employment to the jobless of Southern California. Immediate action was demanded on this score also.

Upon passage of the bond issue, highly competent legal authorities expressed the belief that necessary litigation attendant to its validation should be gotten through with inside of three or four months.

Three and a half months have passed since the election, and the bonds still seem far from validation, even though the courts have lent their fullest cooperation in speeding along the legal proceedings.

Now competent legal authorities, having examined the situation, declare that it may be six months or more before the bonds can be validated and sold.

Why is this? Why are several thousand California citizens being kept from work they so desparately need? Why is Southern California's water supply being delayed a minute longer than is necessary?

The answer lies in the obstructive tactics pursued by those who are attacking the validity of the bond issue in the courts.

Consistently through themonths of litigation since the election, every effort has been made to take advantage of all legal technicalities and bring about the delay. When one case in the Superior Court was settled in favor of the District, the opposition attorneys delayed to the last day in filing an appeal to the Supreme Court. At

the same time an attempt has been made to further delay and complicate matters by filing a second suit in the lower court.

What are the results?

First, of course, many worthy, poverty-stricken citizens are being kept from jobs which would mean to them and to their families a cessation of hunger and privation.

Second, the delay is costing the taxpayers of the District untold sums. For on a project of this nature, it is imperative that options be taken on land that will be used for right-of-ways. Every day of delay gives land speculators further opportunity to take up options that should, for reasons of economy and expediency, be held by The Metropolitan Water District.

Third, it has caused a situation under which the District instead of hiring men, is forced to dismiss them because of a lack of funds with which to pay their salaries - for during this litigation bond money is, of course, unavailable and no loans can be floated. The three-cents-per-hundred tax levy under which the District now operates is wholly insufficient to maintain even a proper skeleton staff.

Fourth, the District has been forced to stop all labor registration. It was thought that delay could be saved in starting work if routine registration could be gotten well under way during the period of inactivity between the election and sale of the bonds. But now the District is unable to pay the personnel staff which as been doing this type of work.

And above all, these obstructive tactics are in effect flaunting the expressed wishes of a vast majority of the electorates; namely, construction of an aqueduct from the Colorado River to avert an imminent water famine that would reek untold disaster in Southern California.

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ON OCCASION OF THE DISTRICT'S BEING GRANTED

$40,000,000 BY THE RECONSTRUCTION FINANCE CORPORATION

Biltmore Hotel - September, 1932

Another milestone in the history of Southern California has been passed. Last week the Administration in Washington, after the most searching investigation, granted The Metropolitan Water District of Southern California a loan of $40,000,000.

In drafting the legislation and in its application to the District's project, the members of both great parties were helpful. Dr. Wilbur and his organization, and the other members of the Administration at all times manifested a sincere understanding and cooperation.

Among our own people I particularly feel I should express our appreciation to the Los Angeles Chamber of Commerce through its president, Mr. Schleicher; to the Los Angeles Realty Board through Mr. McCarthy, its president; and to the Downtown Businessmen's Association through Mr. E. J. Flemming.

The granting of this loan means assurance that Southern California willhave the water it needs. It will mean security against the desert and a foundation on which population, industry and commerce can safely live. Probably more than these, it will mean employment to thousands of our employable people now out of work. Surely those of us who are at this meeting have much to be thankful for to the National Administration that has made these things possible.

Let me tell a story on our speaker today which illustrates how our Government works. Two years ago, after many years of study, investigation and controversy, hearings were held before the Appropriations Committee considering the question of advancing funds for the starting of work on Hoover Dam. The opposition then, as now, were advocating delay for further consideration. I was present and we were pleading the necessity for water, employment and power for the Pacific Southwest. The outcome looked discouraging. At that time our distinguished guest here today, the Secretary of the Interior, appeared on the scene and the Chairman of the Appropriation Committee turned to him with this inquiry: "Mr . Secretary, if this appropriation is approved and money granted for this project, how soon can it be started?" "In five minutes," was the emphatic reply of Dr. Ray Lyman Wilbur, and the victory was won.

Southern California, the Pacific Southwest, and the Nation can never repay the debt of gratitude we owe this man of thought and action for making possible the starting of this great project, the building of Hoover Dam. It gave us new hope, courage and determination to go forward in the building of this empire between the desert and the sea, under the warm blue skies of California, where so many want to live. Great migrations have always followed great crises which have broken up business associations, up-rooting home ties, and driving the people to look about for greener fields in which to start again. The eyes of the world are today riveted, as never before, on the green fields that lie in Southern California. Water is the controlling factor and an adequate supply is beind made available by the building of Hoover Dam.

I am asked daily, "When will work on The Metropolitan District Aqueduct start?" Following the words of our illustrious guest, I desire to reply, "In five minutes after the first installment of the $40,000,000 is received, the Aqueduct, a twin project to the Hoover Dam, will be under way."

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STATEMENT OF SEPTEMBER 8, 1932

Today the United States Government declared its confidence in Southern California. After months of exhaustive engineering,economic and other investigations, Federal experts were able to report that the people and the land of Southern California constitutes a good investment.

More gratifying still is the fact that their judgment was backed up by the hard-headed businessmen who comprise the Board of Directors of the Reconstruction Finance Corporation who approved the report of their experts. By approving the report they authorized a credit advance to The Metropolitan Water District of Southern California during the next two years to the amount of $40,000,000.

This recognition by these men on the other side of this continent is, in my opinion,the greatest compliment that has ever been paid to Southern California. It confirms and reassures our own convictions that we are going to grow and expand. It is another milestone in the progress of the civilization we are here building.

It would be impossible for me to give full credit to all those who have assisted in the effective presentation of the District's application. Individuals and organizations throughout our cities responded and cooperated in a most gratifying way. Among the members of the District's organization to whom great credit must be given, is John G. Bullock who put aside his personal responsibilities and obligations at a time when all business men have multiplied problems to solve. He spent weeks in Washington at great personal sacrifice to give his great ability to this land he loves. Of Mr. William L. Honnold the same must be said. Very fortunately Director McClure of Glendale returned from Europe and proceeded to Washington at the time the application was pending and rendered valuable assistance to the outcome.

The sound and convincing marshalling of facts and legal arguments by Mr. Weymouth and Mr. Howard of the District's staff laid the foundation without which the loan would never have been granted.

In our enthusiasm at being able to say that the project will soon go ahead, we must not lose sight of the fundamentals involved. Of course, many workers will be given employment which they so badly need, and considerable sums of money will be put into circulation which will prove a great benefit to every line of business within the District.

These are incidental considerations to the main purpose of the undertaking which is fundamentally and primarily to furnish a necessary water supply to the growing industry, commerce, and population of this area in a desert region. These are the real justifications for building this aqueduct. Were water not needed as desperately as it is, I would be the first to state that the project should not be built. H wever, there is no choice in the matter. The water is needed and it cannot be secured too soon. Fortunately in acquiring it now we are able to provide employment and to put money into circulation at a time when those things are so badly needed.

In undertaking this work the Directors of the District feel that they have the confidence and support of the people in the cities of the District. The approval which was given the bonds when they were voted on leaves no doubt about that, and nothing has transpired which would cause us to believe that their vote of confidence would not be repeated if called for today.

The Directors are determined to justify the support and confidence which has been placed in them by the voters. They are determined the Colorado River Aqueduct project will be built in the most economical way possible. Not one dollar more of the bonds which were voted will be spent than is absolutely necessary. In addition, every saving which can be made will be effected. The present low prices of materials and equipment, together with constant engineering studies will, I believe, result in saving millions of dollars. It will be the greatest satisfaction to the Directors of The Metropolin Water District of Southern California if, when this project is turned over to the people as a going concern delivering water into the cities of the District, we can point to a large block of bonds in our treasury and say, "That is what we have been able to save the people of Southern California."

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DELEGATION AT WASHINGTON

APPLYING FOR LOAN

1932

Mr. Chairman, Members of the Reconstruction Finance Corporation:

We appreciate the privilege accorded us to appear before you at this time. We believe it is within your power to aid us in the solution of our very grave problems of unemployment and water shortage. We have over 200,000 employable persons in Los Angeles County alone who do not know where their next meal is coming from, and as winter approaches these will be added to by tens of thousands from all parts of the United States seeking our milder climate and charities. They come by freight trains, hitch hike, walk, and by fleets of autos furnished with free gasoline from town to town, as it is cheaper for the various communities to furnish them gasoline to the next place than to feed them, so the whole nation dumps their unemployed on us during the winter months. Last winter they arrived at the rate of over 1000 per day, thus greatly adding to our already almost unbearable burden of unemployment.

That you may better understand our water problem, permit me to call to your attention the facts that no other city in the world the size of Los Angeles exists today except it be built on a living stream or shore line of a fresh water lake. No other city the size of Los Angeles exists in the United States except where they have more than twice the rainfall that we have, a large part of it coming in the summer months when most needed and during which we have no rainfall at all. Any six months of these summer droughts which we go through every year would dry up any of your rivers of the East or Middlewest, almost completely annihilating property values, resulting in great loss of life and deveastating epidemics, yet we must be prepared to stand these droughts for several years' duration at a time.

Let me explain that you may better understand how this is possible. Underlying the Central Coastal Plain of Southern California, on which Los Angeles and 60 some other cities are built, are 29 gravel basins, or underground reservoirs eroded in with coarse gravel. Through the ages the voids filled with fresh water from the glacial period all down through the years. Some of these basins are sealed over with impervious material and fed from mountain streams in rainfall periods. This section used to be known as the artesian belt, and at one time comprised 315 square miles.

When a well was driven through this impervious material, water rose in it to many feet above the surface. This artesian belt has not only now almost disappeared, but over most of it the wells are now pumping this fossil water from below the level of the Pacific Ocean and the corroding infiltration of salt water has now set in, permeating 170 sq. miles of this precious fresh water reserve that has made possible our growth and development. The creeping paralysis of saline death is poisoning our life blood of growth and development. The very financial structure of Southern California is resting on a receding water table, most of it growing more saline each day. It must be replenished with water from the Colorado, made possible by the Hoover Dam, or we perish as all desert cities have perished in the past. Read the history of Babylon, Ninevah, Tyre, Mesopotamia, or Yucatan.

Had we known nine years ago when we started to survey and plan to bring Colorado River water to Southern California all we know today, we could not have planned or timed starting the construction of this great aqueduct to better fit the present unemployment situation, our water needs, or the economic trough of construction material costs. Building the Colorado Aqueduct will produce the same effect in inducing idle money to again flow freely into industrial channels as a motor does at the extreme end of a power line around which the current passes,again returning to the generating plant. Money will flow to this self-liquidating, motivating project from the generating financial center of the East clear across the continent, starting an endless chain of wealth-creating activities both going and returning, increasing commodity prices by furnishing a vast amount of employment.

Our engineering work has been most thorough and complete, as you will see by the prospectus presented. The building of this great project is in the hands of our most conservative and successful businessmen, who are giving unsparingly of their time without compensation. Some of these same men gave of their great ability and time in the building of the Owens River Aqueduct which was built within the time and within the money voted, and which has been a most profitable investment. This aqueduct brings water from the High Sierras 230 miles away and was a much heavier burden for the City of Los Angeles at that time when it was started than the building of the Colorado River Aqueduct would be for that city alone today, yet twelve other cities are now associated

with Los Angeles in this undertaking and some 40 or 50 other lesser cities and towns are expected to join later as they become more familiar with their water shortages.

It is no doubt of interest to you to know that the water rate of the City of Los Angeles is only 13¢ per 100 cubic feet, while the average of 183 of the leading cities of the United States is 18¢; San Francisco's rate is 28¢; San Diego's 25¢; yet none of these 183 cities goes as far for their water, overcomes as many obstacles and distirubtes it over as sparsely settled communities, at as great a range of elevations, as Los Angeles. The reason for this almost miraculous showing is because our great leaders who want to live in Southern California, have accepted the challenge of the desert and are willing to drop their own affairs whenever the four Horsemen of the desert ride - drought, flood, wind, and fire - which have ridden every desert civilization of the past into the desert of time. These men present here today know that water must not be made a political football in desert places because it means life or death.

What does it mean to the Nation to start this great project now? To steady our values by staying our dropping water table, by guaranteeing our continued growth and development. Our growth in wealth and population has doubled every 10 years for the past 30 years, paying into the Treasury of the United States as much as $80,000,000 per year. So from a business point of view, this Government could well afford the building of the Hoover Dam and the Colorado Aqueduct if it never got back one dollar of principal or one cent of interest, for those natural advantages there in Southern California compete with no other part of the United States, and prevent our people from spending their money in foreign countries, diverting it from our trade channels.

First, we can put almost immediately 10,000 men directly to work; second, we will require $17,000,000 worth of construction equipment to be supplied from almost every industrial center of the Nation; third, we will require over 13,000 car loads of copper, aluminum, steel, iron and other kindred building materials available along the aqueduct route, which will have to be garnered from as broad a field throughout the nation.

The High Sierras contain 2300 lakes, the second largest fresh water inland lake in the world at over 6000

feet; more peaks of a greater average height than those of Switzerland; rushing mountain streams all teeming with trout; virgin forests; flower strewn meadows; redwood trees, the oldest living things, some of which are 90 feet in circumference, 30 feet through and over 200 feet high; snow slides and perpetual glaciers; falls in Yosemite three times as high as Niagra - all for summer recreation. Oases in the desert where cheap electricity and water will be made possible by this Colorado Aqueduct, which will traverse 300 miles of desert opening new delights; Salton Sea and Hoover Lake, miles long, furnish delights for winter enjoyment. Thus we combine the best there is in those tourist delights of ocean, lake, stream, valley, mountains, and desert in the closest proximity to each other found anywhere in the world.

Mount Whitney, the highest mountain, from which you can see Death Valley, the lowest point in Continental America, are attractions to divert the flow of tourist gold from Europe, keeping it in the trade channels of America, and are now reached by ocean, airplane or train.

As the money starts flowing into the homes of these 10,000 needy laborers, orders for clothing, shoes, etc., will go to our merchants, from them to the wholesalers in the East, then for cloth and hides to the mills and tanners and from them on to the farmers where our raising of commodity prices will signal the return to better times. These 10,000 local men are only a very small part of the far flung employment activities. We believe that this great project is broad enough and far flung enough in its activities if started now to aid greatly in the return of better times. So we appeal to you men as the representatives of our Government to furnish us with this medium of exchange which you control so that this great wealth-creating, self-liquidating, labor-furnishing activity can proceed in an economical and orderly manner. Hundreds of thousands of our employable people tramp our streets vainly looking for work. Crops are rotting in our fields, water that we so badly need to steady our values wastes itself in the Pacific Ocean, and this self-liquidating wealth-creating job cannot start until we can sell our bonds.

After nine years our engineering work is completed and three times reviewed by the most outstanding engineering boards in America. Our contracts are ready to award. We have the heavy obligation to purchase power from Hoover Dam to pump this water across the desert and through the mountains, yet we perish of thirst and die for want of food, all because we lack this medium of exchange which we are prevented

by law to supply to ourselves. We voted 5 to 1 to place a first mortgage on all the real estate wealth of these great desert cities we represent and every dollar advanced for this great undertaking will be repaid with interest.

These men, the successful leaders of thought and action, are giving their time without pay in order that this project may go forward. We are not asking favors; we are asking that those orderly functions of government be extended to our communities that we may have water to drink and food to eat which our people are willing to work for. We have the self-liquidating project. We have the work, and you men can furnish us the one thing we lack - the medium of exchange to carry on these activities.

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DEDICATION OF BUILDING

IN SAN FERNANDO VALLEY

October, 1932

Ladies and Gentlemen:

The honor which has been accorded me of addressing you at the dedication of this splendid building is one which moves me deeply. The occasion carries me back to the time when standing here I visualized a great community in the heart of the fertile fields of San Fernando Valley. From that distant day I can travel in memory down the road of progress through the years to this day and to this occasion. Through the vista of the years this structure seems to me to rise a monument to all that had gone before, and not only that, it stands a progressive symbol of the greater and finer years that are to come within the view of the friendly encircling mountains looking down upon our happy homes.

Napoleon, when he addressed his soldiers before going into battle on the plains of Egypt, standing beside the Pyramids, said, "Forty centuries are looking down upon us." These mountains have stood vastly longer than the Pyramids and have seen greater and more constructive things take place. They have seen growth. Out of the shimmering grasses of this sunny earth, have come homes and gardens. The germ from which they sprung is rising and expanding in accord with the inexorable laws of nature.

The fusions of the waters of the towering Sierras with this fertile soil has given birth to a still greater growth than in the ancient past, a growth which will broaden and rise in the natural course of events to a productiveness, beauty and culture which we cannot conceive of as we stand here today.

In the history of this valley there stands out one incident greater than all the rest. On the fifth of November in 1913, there gathered on the northern slope of this valley, a great and expectant throng. Thousands of people stood in reverent quietness looking at one of the greatest engineering accomplishments ever performed by the hand of man. At a signal the gates were opened and the water from the aqueduct came rushing down the cascade in an increasing torrent. "There it is, take it," said the grand old man who had done the job.

Those simple words are engraved in every heart that loves this valley. In an equally impressive way those in

authority could say here today of this public building, erected and devoted to the use of the people living here, There it is, take it."

Athens and Rome grew from tiny villages to become reigning cities of the world, whose accomplishments have not been dimmed by time, and perpetuated their spirit in the public buildings they erected. Our growth has reached a point where the achievement of the people requires a more monumental form of expression. The pioneering days are past.

There seems to me a law and a purpose which runs through all of nature. In long sweeps growth takes place toward an invisible perfection. There is endless change. One stage gives way to another, each in turn forming the basis for a new movement onward. This is true of the world, of continents, of our own pleasant valley. The homely little seed of the rose, when planted in the ground, sends out its roots and stems by successive stages and rises through the green plant to reach a culmination in a gorgeous bloom.

Few of us are capable of visualizing this valley as it existed before the coming of the white man. As the seasons followed one another, the grasses turned from green to brown. The grassy plains broken here and there by water courses and an occasional tree and shrub were the haunt of countless birds and beasts living in an animal paradise. Later the occasional Indian bands found here an abundant supply of all they required for the fullest life they could realize.

The next stage in the evolution of the valley came with the Mission Fathers. It has been said of them that "they never blundered practically or artistically in the selection of the sites for their Missions. They unerringly chose from the California wilderness the garden spots and a hundred years of experiment have failed to find anything better than their first judgment." Certainly here has the vision and penetration of their minds been gloriously verified.

Just about a hundred years ago their development reached its fullest swing and in the course of events had to go its way and give place to a new and greater development. Alone, the course of nature is slow. Thousands of years are but a page in her book. When the purpose of man is added to the purpose of nature, the speed of progress becomes multiplied untold times and with ever-increasing rate. The Mission

Fathers, in addition to their extended herds, cultivated a fruitful garden. For this purpose water was necessary. It is interesting to know that the second year after the founding of the Mission an aqueduct was built to a small stream flowing out of the hills on the north side of the valley. A few years later they built a dam across the Los Angeles River and immediately found themselves in legal conflict with the Pueblo of Los Angeles. The Padres lost that fight and went back to their herds.

When the more aggressive white man came on the scene he extended grazing possibilities to their ultimate. The occasional droughts which left the valley bare at the end of the season were his greatest fear and concern. The great drought of 1863-64 put an end to the romance of the great herds. At the end of that season the valley floor was a pattern of bleached skeletons.

Under a group of enterprising men came the great wheat ranches which lasted down to our day. With this development are identified the great names of Van Nuys, Lankershim, Porter and Maclay. The abundant yields of the valley paid tremendous returns in spite of an occasional crop failure resulting from a dry year.

The next link in the chain of progress began with the incident which I previously mentioned. The Owens River water furnished the one element the valley lacked. A new and higher use was ushered in before which the wheat fields gradually disappeared. In their place sprang up homes surrounded by orchards and gardens. Towns were built and homes, connected by a maze of highways, sprang up as though from the planting of a magic seed. Schools, churches, and the refinements of advanced civilization revealed the combined purpose of man and nature maturing beyond the pressing and immediate needs of life. Here in beauty and comfort in the midst of productivity was to be found the blessings of the earth and a full life.

Many like myself with impaired health have found here that most precious worldly asset. Our great citizen, Mr. Harry Chandler, who was one of the greatest friends and benefactors the valley has known, came here under like circumstances and was rewarded with the same result. His vision, and that of his associates in the Suburban Homes Land Company, in my estimation, advanced by many years that natural fruition that we now see about us.

Behind us lies this progression from raw and naked nature to contented homes within and without in the finest sense of the word.

We are today dedicating a monument to the past and a milestone in our progress. The countless years that lie behind are summed up in the single word "growth." Always onward and upward have we gone. Here there is no stopping. The glory of the past is the least part of it. What lies beyond the dim or unseen veil of the future, is assuredly the larger and finer part. As if I stood in the tower of this building and looked down, I can see the valley of the future. With the same confidence that I felt when the first corner-stake was set where now stands the town of Van Nuys, I can see what must inevitably be the course of progress.

From mountain to mountain in all directions, interspersed with jewel-like cities, will lie a mosaic of comfortable homes surrounded by garden acres. From these homes will daily travel back and forth to the great industires which are now building here in the Southwest, a contented people engaged in all the useful occupations of man. The work days of the future will be shorter. The number of days of work each week will be fewer. The hours not devoted to hiswork or his profession, the worker will devote with his family in the cultivation of his garden which will yield to him throughout every season the best the earth and vine and tree can produce.

This development I visualize with you is the ultimate which we will approach under our present conceptions. Beyond that we need not think. Conceivably there will be in accordance with the law of growth and progress a still greater future. New inventions, new customs, and new ideas will come to replace the old ones and create a new order before which even the growth I have visualized for you will give way and be displaced.

That is the story. We are in the middle of it. We look behind and see great things have been done, and we look beyond with confidence and know that the future has still greater things in store.

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STATEMENT OF OCTOBER 28, 1932

Under the wage scale which has been adopted by the Board of Directors of the Metropolitan Water District, $3.80 is the minimum daily wage which may be paid to laborers employed on construction of the Colorado River Aqueduct.

It has erroneously been reported by persons outside of the District organization that the District wage scale for common labor is to be $3.20 per day. As a matter of fact, the District has provided that for unclassified types of employees, such as janitor's helpers, mess hall helpers, and water boys, the minimum wage shall be $3.20. This minimum wage of $3.20 for unclassified workers was set for the definite purpose of protecting this type of help against the possibility of much lower wages.

In any event, only a comparatively small number of persons would be employed under the $3.20 scale which has no relation at all to the higher wages which are to be, and which must be, paid all other classes of labor.

No man employed on aqueduct construction work will be paid less than $3.80 per day, the minimum daily wage for unskilled labor. The minimum day's pay for all classes of skilled labor has been definitely set forth in the District's wage schedule.

The wage scale adopted by the District for skilled and unskilled workers is based on a careful and thorough survey of wages actually being paid in Southern California. In the investment of public funds in the construction of the aqueduct the Board clearly recognizes the fact that it is not justified in authorizing the payment of wages higher than those actually being paid in Southern California.

At the same time, the Board of Directors and the General Manager were and are determined that wages paid all types of workers shall be fair and just to the workers themselves. Accordingly, the schedule of wages adopted is believed to be fair to both the workers and the taxpayers and water rate-payers.

With the further view of protecting the workers against the possibility of exorbitant charges for meals and lodging, the Board, in its advertisements for contractors' bids, has provided that the contractors shall not be permitted to charge more than $1.15 per day for three meals

or more than twenty-five cents a day for lodging. It is hoped that meals and lodging can be provided at rates even less than this maximum charge, but, in any event, the Board is determined that in no instance shall a greater amount be charged than these maximums that have been set.

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Before the

LOS ANGELES UNEMPLOYED VOTERS' ASSOCIATION

November 2, 1932

No one realizes the true situation in Southern California more than the Board of Directors of The Metropolitan Water District of Southern California. Lack of the ordinary necessities of life has brought many proud and capable men to us asking for work, regardless of the kind. We have received reports showing the number of unemployed, and have had the cooperation of public spirited citizens in doing everything possible to get the aqueduct work started.

In their efforts to get the work started, the Directors have never spared themselves. They are giving their time to this work, in some cases at a large personal sacrifice.

I personally am firmly convinced that once the Colorado River aqueduct work is started, the back of the depression will be broken, so far as Southern California is concerned. Within nine months after the work is in a position to go forward, our General Manager and Chief Engineer informs me, there will be forty-five hundred men on the job. This number is expected to increast to nine thousand by the end of twenty months of operations. With these thousands of men assured of steady incomes, money will naturally start to circulate and we will find thousands of other workers, in lines independent of the aqueduct, back to their jobs. These workers will in turn put more money into circulation, and so the thing will go on speeding up the recovery which, in many respects, is already well under way. The actual benefit to be derived from the starting of this work should be much greater than that resulting from the men directly employed.

The Metropolitan Water District is ready to start now, as far as the engineering work is concerned. All of the plans on the work to be started first, are finished. Arrangements have been made for the power necessary to operate the construction machinery. Bids have been called for on power lines and substations. The specifications are now in the hands of the contractors for the construction of the San Jacinto Tunnel, the biggest single job on the project.

I want to outline to you briefly the situation that is confronting the District. Ever since the bonds have been

voted, the work has been snagged and spragged by some who apparently have little regard for the necessity of getting more water to Southern California as soon as possible. They have, in effect, unnecessarily delayed the time when thousands of needy men and women could have been given jobs. On October second, the last litigation in the State courts was ended. This litigation can be said to have held up the starting of the work since last January. While this litigation was going on, as you all know, a slump occurred in the bond market which might have made it difficult for the District to finance in the usual way, were it in a position to do so. We got over that difficulty by taking advantage of the Relief Legislation sponsored by the Administration in Washington, to qualify the District for a loan. As you all know, we succeeded in doing this to the extent of obtaining from the Government a loan to the amount of Forty Million Dollars. Then again we were faced with opposition to the best interests in Southern California. If the way could be cleared of legal obstacles, the attorneys inform me that the funds could be transferred to the District within 15 or 20 days. The case in Washington comes up for hearing tomorrow. Whether we can proceed immediately may be known within a comparatively short time. If the needless obstacles that have been holding us back can be gotten out of the way promptly, the work should be in full swing before the first of the year. If not, your guess as to when we start, is as good as mine.

I want to mention briefly the employment system of the District. Most of you no doubt saw in the newspapers a few days ago that the District had started receiving applications for clerical and technical positions. Many of you, I presume, have filed applications in the classifications now open. When starting of the work is assured, registration will begin for all the kinds of workers needed on a job of this kind. In selecting the worker, aliens will be excluded. The employees will be confined, in so far as is practicable, to qualified residents of the member cities in the District. In accordance with the Government's ruling, preference will be given to Veterans with dependents.

Every employee of the District will be selected on the basis of his merit, that is to say, his capacity to do the job for which he is hired. A fair and carefully planned system has been set up which it is believed will give every man the protection which his ability deserves.

Much of the work will be carried on in the desert. For a part of each year, during the winter months, working conditions will be ideal. During the summer, there will occur periods when the workers will be subjected to conditions of a desert climate. In view of these factors, and aside from a number of considerations dictated by human interest, the Directors are determined that the workers ahll be afforded every protection and care which can reasonably be expected on a project of this magnitude spreading over such a wide territory. Conditions of living and housing must be right. The food must be good, adequate, and the proper kind under the varying conditions. We want to carry out this job as efficiently as possible in a way that is fair to every person who may be in any way concerned. The Directors of the District desire that you should understand the problems that we are up against. We want you to realize and know that we are doing everything within our power to get the work started. Your cooperation and helpful understanding will make our task easier and hasten the result which we all so much desire.

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Before the

METROPOLITAN WATER DISTRICT CITIZENS' COMMITTEE

November 3, 1932

You men and women have been called together here today for an extremely important purpose. Among you are constructive, sound leaders from every phase of our community. Never before have you had a greater opportunity to render a constructive community service to Southern California, which has been so good to all of us, than now in these trying times. In spite of present economic conditions, we are on the threshhold of a new era.

Nowhere in the United States, nor for that matter, in any other part of the world, exists such an opportunity to create new wealth on a self-liquidating basis and at the same time give constructive employment to thousands of needy employable people.

The Colorado River Aqueduct will endure forever. When all of us are gone, it will stand a monument to our children and to each succeeding generation. When it is finished, all of us who are participating in this great work will have the satisfaction of knowing that we had a part in causing two blades of grass to grow in a desert place where those now growing are every year faced with witherind drought. All statements to the contrary, I am firmly convinced that the Colorado River Aqueduct was never more needed than at present. Even now we are attracting more favorable attention than any other part of the globe. Great migrations follow great crises. In such periods the breaking up of business associations and the uprooting of the established order of things creates the opportunity for new adjustments and social combinations.

However, present conditions have made enterprising people and those who direct our industries, to weigh more carefully conditions and opportunities. Investments are made only after the most careful investigations. The scarcity of water is a crucial factor to industries contemplating an investment in desert areas. If we are to take advantage of the readjustments that will follow this depression, we must be prepared in this essential matter of water supply. To be prepared when the time comes, the District must have the support of the substantial elements of the communities which you represent in pushing forward construction of this aqueduct. The communities must be united to the task. Within your power lies the strength to bring about such a united support.

The employment that will be afforded thousands of needy citizens is a secondary consideration, but none the less important. The primary thing is that the project is sound, the water is needed, and we are capable of carrying it through as the greatest investment ever made by an people similarly located. That these primary objectives can be accomplished and at the same time afford relief to unemployment under the existing conditions, is a most gratifying thing. We of the District believe we have demonstrated our ability to carry it to a successful completion. We know we are right. We know the same evidence that has convinced us and has convinced you will convince those who find it in their hearts to oppose this great civic undertaking.

The work is being carried on by a proven organization under the leadership of Mr. F. E. Weymouth in whom everyone that meets him and knows of his record can have nothing but supreme confidence.

The Directors of the Board are in every instance capable and experienced and among the best that our communities could afford. They are carrying on unselfishly and at great personal sacrifice. In every instance the obstacles that have confronted us, insuperable as they have seemed at times, have been overcome. We are winning and will continue to win. We want your support; we want you to share in our achievement. Your help is no less important in the final success than our own. We need your counsel and your efforts to maintain the undertaking on the highest civic plane so that we who are giving our time to the project may feel with confidence that our efforts are efficiently directed and are not being wasted in useless and wasteful distraction.

We of the District can assure you that the work is being carried on in a thorough and idealistic manner. It is as clean as a hound's tooth. Every one of our men, our Controller, our Treasurer, are giving unsparingly of their time and, if possible, more painstakingly, in their determination to get a full one hundred cents' value on every dollar expended by this Board than they are in their own affairs. Never have we found that their own affairs are so important that they will not drop anything to help in the solution of our problems. Our problems are your problems. All of you know how Mr. John Bullock, Mr. Honnald, Mr. McClure, and others, gave weeks of their valuable time in Washington to obtain a loan from the Government. They were successful and

brought back Forty Million Dollars for Southern California and Southern California's labor. This is only one illustration of the many examples that could be cited.

The purpose of this committee which is being organized today, is to make this a solid, harmonious community organization supported by every right-thinking citizen of our cities. You people are qualified by experience and clear thinking to prevent the true facts as to the water situation in Southern California from being confused and distorted by those who are selfish and shortsighted. Your very presence and participation will be an inspiration to us and will serve notice on unscrupulous politicians, profiteering land speculators, or exploiting contractors and material men, that this undertaking is above the meanness, pettiness, and the graft which we have seen so often wreck similarly worthwhile public projects.

Not only do we want you to be associated with us in making this undertaking a glorious success to be held up as an example to future generations of a great job well done, but we feel that yours is an equal duty and obligation to lend us your sincere conscientious support in accomplishing the ideals which I have indicated to you.

If you are with us, as I am sure you are, I know that in a few years from now you will share in the undying gratitude of the people living here and to come, who will be able to say, "Those men did just such a fine job as was done by those who built the Los Angeles Aqueduct."

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Before the

SOUTHERN CALIFORNIA WOMENS' CIVIC LEAGUE
at
LA CASA GOLENDRINA

November 4, 1932

Madam Chairman, Members, and Guests of the Southern California's Women's Civic League:

I am not going to talk about politics. After trying for several weeks to find a musical program on my radio and listening to a number of speakers at public meetings, I have come to the conclusion that no one is talking or thinking about anything else. However, my subject is entirely wet, though it has a reputation for being exceedingly dry.

Among the Portugese there is a proverb handed down from ancient times which reads, "What water gives, water takes away." This bit of wisdom seems to me to apply especially to Southern California. Water has given us beauty and fertility of this most pleasant of all lands, and if our water supply should fail, they will be unquestionably be taken away. In desert areas such as ours, the relationship between water and life is exceedingly close. Even a slight falling off from the average rainfall brings with it loss and suffering.

We can arrive at an index of the importance of a water supply by investigating the number of cases and the amount of money that is spent in litigation over water rights. All of us know from personal experience the endless fights and the ruinous attorneys' fees resulting in all parts of Southern California through disputes over what frequently proved to be dry wells or undependable streams.

It seems to me very appropriate to talk water in this delightful and romantic spot, reminding us of the quiet days of the Dons. I remember reading in the papers at the time this work which Mrs. Sterling and her associates so nobly conceived and executed was in progress, of the discovery of evidences or remains of the old mother ditch. As I recall, a marker was placed to indicate where it crossed this street before circling around the hills toward Main Street and continuing across the heart of our high valued District in the vicinity of Pershing Square. There is no doubt in my mind but what the location of the City of Los Angeles was determined by the water which was made to flow in that ditch. The records reveal that before the coming of the Spaniards an Indian Village with ancient traditions was located on the Los Angeles River not far from the Plaza.

The first Spaniards brought with them a knowledge of water supply and the principles and practices of irrigation which the northern Europeans did not possess. Theirs was a country of relatively meager water supplies, very similar to Southern California. We are told that the Spaniards acquired their knowledge of the principles of irrigation from a truly desert people, the North African Arabs, who conquered a large part of Spain in about the Ninth Century. Upon the knowledge transmitted down through the generations from this distant source, with the employments of methods and equipment brought about by an industrial age, it can be truly said that our communities here depend for their very existence.

We are, in every sense of the word, dependent on the weather. People coming to live in Southern California from areas of abundant rainfall, are frequently slow to appreciate this fact. They remember the heavy downpours which occur two or three times during a normal winter when streams overflow, and water rushes along the streets, but forget the dry periods in between and the frequently rainless summers. In making comparisons, the fact is often overlooked that there is no city in the United States approaching Los Angeles in size but what has not only much more rainfall, but has it fairly evenly distributed throughout the year. In other words, they do not have to devise meands of conserving the rainfall of the wet period so as to have it available during the dry season.

The storing of water in reservoirs which, by the way, are exceedingly scarce in Southern California, brings other problems. Under our sunny skies, evaporation is high. A reservoir thirty feet deep would entirely disappear by evaporation in five years even though not a drop of water were used from it. The difficulty of maintaining water pure and clean during such periods, is another problem. The great salvation of Southern California has been the fact that the soil beneath our City is porous. In the gravels which filled the ancient valley in the centuries before the coming of the white man, was stored the water upon which we have been living and growing for the last thirty years.

In addition to the fact that Southern California has much less rainfall than cities of equal size throughout the United States, it is not located on a living stream or a fresh water lake. If you will run over in your mind the different large cities, you will realize this significant

fact. The question of providing water for a great city is not merely one of obtaining a sufficient quantity to carry on from one winter to the next; there is a much broader and more important consideration. The years vary greatly as to the total amount of rainfall which is received. Some years are wetter than others. Then again we have what are called "cycles" in which dry years succeed one another. The longest dry spell is the critical period for which the water supply should be planned if suffering and property loss is to be entirely avoided.

It must be borne in mind that the source of all water which is used by human beings is the rainfall. In the last analysis there is none other. During the past thirty years, the significance upon civilization of climatic changes has begun to be recognized and studied. Some of the greatest authorities on this subject have shown a very definite relationship between changes in climate and the great upheavals and movements of people which have occurred down through the ages. It is generally believed that there has been no permanent change of climate since the Iron Age. Very careful studies reveal that the great movements of Barbarian people living on the great plains came during a dry cycle. Some have shown with considerable success that the downfall of the Roman Empire was a result of a long dry cycle which ruined the agricultural backbone which existed in the nation at its prime.

To those of us endeavoring to build a great community in a desert environment, these are all important facts. A study of our past history gives them double emphasis. It can be fairly said that the history of Southern California can be recited in terms of water supply. The Dons brought with them their horses, cows, sheep, and built in an incredibly short space of time, a large and profitable industry based on grazing. The abundant feed and the ideal climate made their herds increase with amazing rapidity. Cows, mares, ewes, matured a year earlier than in the East, and bore more frequently. Also, there were few of the diseases which occurred in the older countries. Herds rapidly increased to the capacity of the pastures. During the winter and spring, there was almost invariably ample feed for the stock which wandered between the lowlands and the mountain slopes. A year of scant rainfall, however, would leave the pastures dried up by late summer or early fall. The carrying of the herds through the fall and early winter period was the great problem of the Spaniards. The more energetic and

progressive Gringo sometimes supplemented the natural pastures with cultivated fodder. Nevertheless, the climate wrote "finis" to the grazing industry. In the drought of 1858, seventy thousand cattle perished in Southern California. Five years later, in 1863, to all practical purposes, came the end. Between two and three hundred thousand cattle, or two-thirds of all those in Southern California, died in that drought. It has been reported that one could walk across the San Fernando stepping entirely on bones. The cattle industry rapidly fell from first place to third or fourth.

The growing of grain leapt into prominence. By skillful farming, abundant crops could be obtained the majority of the year. The crop was so exceptional that a total failure every few years due to rainfall, could be accepted. The rest of the story is better known. In the eighties, irrigation was introduced. Then came the citrus and other products. The mechanical pump was perfected, giving access to the accumulated stores of water in the ground. Every year the drain on our reserves has increased. The farsighted leaders of Los Angeles, of which William Mulholland was undoubtedly the first, saw clearly that unless an additional supply of water was brought to the Coastal Plain of Southern California from a source not dependent on local rains, our growth would be forever limited. The population that could have existed without the Owens Valley water has been liberally estimated as not exceeding 300,000. The finishing of the Los Angeles Aqueduct was the beginning of a new era. With an assured water supply, which at that time was estimated as sufficient for 75 years, industry could with confidence come into this area.

As the fact that the growth exceeded so much the expectations that the amount of water brought in was used up became apparent, the necessity of obtaining more water became imperative. This was the situation which brought into existence the Metropolitan Water District Aqueduct which is now in the first stages of starting work. The engineering plans are finished and the work will be started as soon as the legal requirements and obstacles can be overcome.

A clear picture of what the construction of the Colorado River Aqueduct will mean to Southern California must take into account two factors. First, its bearing upon our present situation and secondly, upon the Southern California of tomorrow. To anyone who has the time and inclination, it can be easily shown that the amount of water available locally plus that being imported from the Owens Valley,

is less than the amount being consumed. In other words, the deficiency is being met by drawing upon the ancient underground reserves which I mentioned earlier.

The general knowledge that our water supply was inadequate has unmistakably retarded our growth. Industries are timid about spending vast sums which may be rendered worthless or impaired by a curtailment of the water supply necessary for operation. Water from the Colorado River will eliminate this condition.

As to the second factor, or what the water supply from the Colorado River will mean to generations yet to come, I believe that most of you here are in a position to judge equally as well as myself. That people throughout the United States want to live in Southern California goes without saying. That industry has its eyes turned in this direction is quite evident. The natural resources capable of supplhing 85% of the materials entering into the manufactured products of the United States, are to be found within three miles of Los Angeles. Competitive industry will naturally seek the lower production costs to be obtained under the influence of a mild climate.

The power resources available from local facilities and the great Hoover Dam Project, assures sufficient energy at a reasonably competitive cost. As to the labor supply, Southern California is again in a favorable position. For many years I have made a very careful study of the attitude of the people in the Eastern centers toward Southern California. Once or twice a year while in the East, I have selected representative men of all occupations and put the question to them, "Do you want to move to Southern California?" The results indicate clearly that in almost every case they not only want to come to Southern California, but are willing to do so at a lower rate of pay. The depression has not changed this situation. In fact it will, in my opinion, increase the trend to Southern California. Under the stress of economic conditions, men who regarded themselves as permanently established in the East found themselves uprooted. They are no longer tied to local affairs and social orders. With their remaining resources, they are looking about for new and better opportunities in making a new start. Southern California is going to be the goal of many of these people, and as soon as the present condition, which is certainly on the mend, has sufficiently improved, we will see a growth greater than any experienced in the past.

The Pacific Coast will represent an ever-increasing market. In years to come, there will be an adjustment

of inter-national exchange, and Southern California will undoubtedly become a manufacturing center distributing goods to the teeming millions surrounding the Pacific. Our growth will, in my opinion, take on a somewhat different aspect in the future than it has in the past.

The depression has taught many people the insecurity of a purely industrial civilization. When a man produces nothing which can be eaten, his existence is always uncertain. The diverting of his physical energy and knowledge to producing automobile parts and cigar lighters makes him absolutely dependent on his daily wage. When that ceases, unless he has accumulated reserves, the problem of food becomes a pressing one, and society is faced with the problem of feeding him. The answer to this situation is the combining of small scale agriculture with an industrial occupation. The trend is toward shorter working days and fewer days per week. This will give people more time to themselves. In no better or more healthful way can such time be spent than in cultivating a small garden surrounding his home and capable of furnishing him with much of the food which he and his family consume.

I know of no place in the world where such a combination of small scale agriculture and industry can be accomplished, as in Southern California. Here we have an ever growing industrial center requiring thousands of workers, immediately adjacent to exceedingly fertile soil. The only element at present lacking, is sufficient water to place the small home gardens on an intensive production basis. The supplying of this water will, in my opinion, be one of the greatest benefits to be derived from the building of the Colorado River Aqueduct.

Aside from the more permanent benefits that I have mentioned, is another factor which in these times of great unemployment cannot and must not be overlooked. That is the necessity of providing men with work and of getting money into circulation so that others will be given work. The aqueduct will put to work our engineers estimate, within four months after starting, 4500 men. At the end of the first year this will be increased to 9000 and will reach a maximum of over 16,000 toward the later years of construction. You can be assured the Directors of the District have been devoting every ounce of energy they possess toward getting the work started. No one realizes more than they the responsibility which rests upon them. However, the obstructive forces working through the complications of law are making the problem exceedingly difficult.

If all the difficulties now confronting the Board can be cleared away expeditiously, the work can be started within a month or six weeks.

Nearly every one believes that a democracy is the best type of government yet devised by man. However, we must concede that in certain respects other forms have something to be said in favor of them. I am going to illustrate what I mean by an incident from history. When Napoleon returned from one of his Eastern campaigns, he decide, or probably felt it expedient, to do something in a big way for the City of Paris. He called in the Minister of Home Affairs and asked him, "What can I do to give Paris a population of two million people within the next ten years?" Such an undertaking was a characteristically big job when we realize that Paris at the time had a population in the neighborhood of six hundred thousand. The Minister of Home Affairs answered the question promptly and said, "Give Paris an adequate water supply." Napoleon then asked him if he had any specific proposal in mind which he could recommend. Thereupon the Minister of Home Affairs outlined a plan of constructing a canal to a stream some distance from the City. When he had finished talking, Napoleon said, "Your plan is good. We will start tomorrow. Send five hundred men out to work in the morning."

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BEFORE THE CITIZENS' COMMITTEE

November 29, 1932

Gentlemen:

We of the District sincerely appreciate your attendance at this meeting today. In calling you together, we hope to have a frank and open discussion of the aqueduct project, particularly as to any phases in which you men are especially interested. You men are leaders, not only in your respective professions, but also in the community. It is, therefore, important that you should understand the aqueduct project in the same manner that those of us do who have been giving our time to this work for so many years. We need your understanding, your cooperation, and your assistance.

Great progress has been made, and many difficulties and obstacles have been overcome. Many more problems will arise,many of them becoming less technical and more social and governmental as the work proceeds.

In our efforts to keep the project out of politics, and to build it in the most efficient manner possible, we need your fair and helpful understanding. The Directors of the District have, in every forward step that has been taken, satisfied themselves as to its soundness from every angle. The plans have not been reached or created overnight. Years of careful study and investigation have resulted in a gradual maturing of the project. The route, its size, and all the features associated with them, can be justified in the mind of any intelligent person who is willing to devote himself to an analysis if the data and the conclusions drawn from them.

As in the case of all great projects, we have met with opposition. This has always been the case in public undertakings and something which must be taken for granted. It was true of the building of the Los Angeles Aqueduct which has so gloriously justified itself. A man who has been a resident of Southern California for a great many years, and who has taken an active part in public affairs, some time ago told me frankly that at the time the building of the Los Angeles Aqueduct was being done, he was opposed to it and had fought it every way he knew how. He said at that time, thirty years ago, he felt that Los Angeles had reached its growth, that the water was not needed, and that the little community could not stand such terrific expenditures.

Some of our people are voicing similar thoughts today. In many respects, the situation which exists now,

and that preceeding the building of the Los Angeles Aqueduct, are similar, if not almost identical. That project was conceived in the panic of 1903 and started in the depression beginning in 1907. The thing that put it over in the face of strenuous opposition, was the faith of those strong and courageous people in the future of Southern California and the knowledge that more water was imperative.

That is the basis upon which the Colorado River Aqueduct is justified today. It is entirely a question of water supply. Anyone who will investigate the facts will come to the conclusion that not only must we have more water for growth, but we must have more water to maintain the progress that we have achieved.

Even aside from the conclusions of the technical reports, I believe that such a necessity is self-evident. The fact that the block at Seventh and Broadway uses 86 verticle feet of water a year over the entire area is a fact that many people do not realize. Also, that the present requirements of the City are almost 40 inches a year as compared with an average rainfall of 15 inches, which at times over a period of successive years runs much less. We must not overlook that there is no other source of water than rainfall. Also, that the less rainfall an area has, the more important becomes the consideration of providing a water supply for human needs and the maintaining of values.

You gentlemen were invited here today particularly because you were known to be interested in the questions and necessity of public economies. Most of you are members of the Citizens' City-County Consolidation Committee, the merits of which, I believe, are obvious. Speaking for The Metropolitan Water District, I feel that I can say you will not find any group of men more desirous of effecting public savings and economies, or more active to that end, than its Board of Directors. Personally, I have for many years fought the needless expenditures into which we have been rushed by speculative considerations. In 1926 I fought with every resource at my command, against needless special assessments which were robbing people for the benefit of those interested in selling real estate, paving streets, and erecting electric lighting systems which were not needed by any stretch of the imagination, and so on.

There has been on the part of our people a failure to distinguish clearly between wealth absorbing enterprise

and those which are investments. In most cases, expenditures for public improvements before the time they are needed, is an absolute waste of public money, and represented expenditures for which there was no return, or at best an intangible one. Unless the cost of improvements can be recovered in an actual increase of value and income, they are not justified. The intangible factor of the convenience of having paved roads or better lights, or other improvements, have not in any sense of the word been justified in many instances.

These projects referred to, must be paid for out of the earnings and income of the community. They represent a dead load on the people. Contrasted with them, we have the type of project which returns in whole or in the major part, the money expended and the annual charges including interest, maintenance and operation. The relief measures adopted by Congress at its last session, had this distinction in mind when it limited loans to self-liquidating projects, projects that will pay for themselves out of earnings and revenue and will not become a burden to be dragged along by the already oppressed taxpayer.

The Los Angeles Aqueduct is an outstanding example of a self-liquidating type of project. The revenue from the sale of water which it conveyed from the High Sierras was more than adequate in spite of the fact that the water was sold at rates which would have been absurdly low for a community in a region of ample rainfall, let alone a desert area. I have estimated that the wealth created by the water delivered from the Los Angeles Aqueduct in the San Fernando Valley alone,was far in excess of the cost of the Colorado River Aqueduct. That water represented less than a fourth of the capacity of the aqueduct, and much of it was subsequently recovered from underground. All of our population in excess of 350,000 and the corresponding wealth of the City, exists solely on the water brought from the Owens Valley.

The Colorado River Aqueduct is a self-liquidating project. We were convinced of that ourselves. When the District made application to the Reconstruction Finance Corporation, it was the first major project to be investigated. The experts of that organization were determined not to make a mistake in the first instance, and went into our project with a thoroughness that probably no other one will receive. They satisfied themselves as to the technical, financial,

legal and economic phases of the project, and on the basis of their report, the loan was made. Let me read you from the recommendations of the Advisory Board to the Reconstruction Finance Corporation what they have to say about the Colorado River Aqueduct:

> "In our hands rests an important responsibility with regard to the future of Southern California. This spot is one where people naturally desire to live. It will continue to grow regardless of conditions in the balance of the nation or of the world. I believe the growth to follow the construction of this aqueduct will exceed that of the Los Angeles Aqueduct. The depression will speed up rather than hinder the movement of people to Southern California. The old order has been broken up and men have been freed from old connections and associations; they will not hesitate to move to the place presenting the best opportunities. Our contacts in different parts of the country indicate that this is so."

In making these opening remarks, I want to indicate to you the position and attitude of the District. You men here today are among those who have most to gain in having this project completed in an expeditious and thorough manner. We hope that you can satisfy yourselves of the considerations which have convinced those of us who have been associated in this work. We believe we deserve and merit your confidence, and are entitled to your assistance in guiding and directing the project to a successful conclusion. There are those who have in the past, and will continue with greater vigor, to attempt to control and profit from the funds to be expended in building the aqueduct. Needless to say, every effort will be made to avoid the waste or misappropriation of a single dollar. Your understanding and support, actual and moral, will be a great advantage to us in the fights which we undoubtedly will have.

Not only are we determined that the project shall be built in the most efficient and economical manner possible, but that it shall be built at the least possible cost consistent with the nature of the undertaking and its purpose. I, for one, am committed to the principle that any savings by modifications or deferment should be accomplished. I firmly believe that when the project is finished and is in operation, that the cost will be far less than the amount of the bond

issue authorized. To me that would be the greatest satisfaction possible for the years of work I have given to this undertaking.

With these remarks in mind, I think it would be proper to open the meeting to a frank discussion of the attitudes and opinions of every one present. We desire to know what you think and want you to know our plans and what we are thinking.

* * * * *

Before the

LOS ANGELES REALTY BOARD

December 13, 1932

I want to give you some of my personal experiences because of the way they fit into the problem of The Metropolitan Water District and the need for more water in Southern California.

My grandfather brought the first coke into Pittsburgh, floating it down the Alleghany River on rafts. The family took over the business when my grandfather passed on. However, it was about that time that industry began to move from Pittsburgh to Chicago because the farmers had sold their lands to the factories at profitable prices with the result that Pittsburgh had to import her food requirements.

Chicago, on the other hand, was in the center of those fertile food producing states around the Great Lakes and in the Mississippi Valley. It has been said that industry moves on its stomach, and some times a stronger word is used. I saw that take place and the profits go out of the coal industry. The family then moved down into Kentucky and pioneered in the coal business.

Coal is a highly competitive industry. The mine must be established within a certain radius of the industrial district. As soon as a plant gets outside the range of competitive tariffs it is hopelessly licked before it starts. This we found out in Kentucky where we are always just one jump ahead of the sheriff. Finally we were sold out, and I went to Chicago.

There I determined to make an intensive study of the relationship between industry and the migration of population. On the basis of my studies, I went down into Indiana in the vicinity of Sullivan and located a coal mine. My mine was within fifteen miles of the center of the population of the United States at that time.

Industry, in those days, was dependent upon coal supplies. Wherever plants were set up they were always concerned as to whether the coal producers would gang up on them and fix the price. For that reason, when the big industrial development was established at Gary, the men behind the development insisted on tying up the coal lands to the end of the amortization period of the investment. At that time I had information which would have made me a million

dollars. Mr. told me that they were going to move the industry to Gary and advised me to get in on it. I went down there, looked at those sand dunes along the lake shore and couldn't see anything in it. I sold my coal mines to those men for $30,000 and that was the money on which I came to Southern California.

When I came here I was in poor health. Before leaving the East, I made a canvass of my friends to find out what they were thinking about Southern California. Everywhere I went poeple told me that they wanted to come to California but they were not able to do so at that time. I came out here with the conviction that the place was going to grow. I was convinced that this area would become a large industrial center, located as it is on the rim of the Pacific Ocean with all the growing foreign markets.

I knew that industry meant population, and population meant values. I expected the money I had to earn enough to keep me and began looking around for an investment. Down on Florence Avenue where the Florence School House now stands, I discovered a walnut grove which was just about the prettiest grove I had ever seen. I bough it and the man who sold it to me gave me a sworn statement that it had paid 6% a year for the last six years. I paid $50,000, putting up $10,000 in cash, and giving my personal note for $40,000. The man I bought it from suggested that we handle it through a trust company. I asked what trust company, and he said the Title Insurance and Trust Company, and I said all right. That trust is a trust of record over there today, number 2.

When I came to take over the property, I discovered that the man who owned it had been using sewage water on it, and that the neighborhood had grown up somewhat and he had been ordered to stop using it. I had a walnut grove without any water. I went to a neighbor who had a well but he told me he couldn't supply enough water for the grove for irrigation.

At that time there were several subdivisions being put on. It was just before the Script panic in 1905, and this fellow told me that if I would subdivide it he would sell me enough water for domestic purposes, and that is how I got into the subdivision business. If you will go over to the T.I.T. you will see where it paid me over $200,000 on an investment of $10,000. That was experience number one.

Then I went up to Acton. I wanted to get out on the desert. I built myself a house up on the right hand

side, and probably some of you have seen it. When I tried to get some water, every well I put down was drier than the one before. I shipped a well-drilling outfit up there and made that country look like a Swiss cheese. Those are my first experiences with water in Southern California.

When I came out here, I thought that any place I put down a hole I could get all the water I could ever want. In the coal mining business I never sunk a shaft or drove an adit without being deviled to death with water.

Then I went over to Phoenix. They were building the Roosevelt Dam. I felt on the basis of my experience that values were going to increase as soon as the water became available. I told the agent to get me a piece of land out near the Heard place. He scouted around and found a piece about 20 or 40 acres, I forget which, right across from the Heard place, and I bought it. I wish I could have gotten more. When the water came in I doubled my money.

Then I took up a claim in the Imperial Valley under the Desert Act, and am farming that down there today.

Then I came back to Southern California, and they were talking about bringing in the Owens Valley water. The Suburban Land Company had bought 47,000 acres in the San Fernando Valley. They offered me an opportunity to get in on it, but I didn't want any more investments in real estate in Southern California until I was sure there was going to be water for it. They paid $50 an acre for that land.

Later when the water was assured, they wanted someone to put on a subdivision at the townsite of Van Nuys. I bought that land at $550 an acre. Later on I bought still more. Then we put in the poultry industry and built it up to an annual revenue of over $2,000,000.

The thing I want to point out in citing these personal experiences is that land in Southern California without water is valueless. You couldn't give me the best piece of land in Southern California if I didn't know there was going to be sufficient water to take care of it. Right now you have falling water tables, salt water encroachments down at Santa Monica, Long Beach and the Santa Ana River.

Industry is going to watch its investments closer than ever. You can't fool them any longer. They know conditions in Southern California. They are not going to invest

in propositions which will become as worthless as the stocks and bonds they have been buying the last few years. Take the little plant of Proctor and Gamble down at Long Beach. Before they would locate there they made the City guarantee them a certain amount of water. Responsible people down there who know what it's all about, told me that they wouldn't dare make another agreement on the same basis.

I feel I know this subject of industry and migration of people. I have made an intensive study of it for many years. I have made trips back East from time to time and contacted people in different walks of life. I always found them interested in moving to Southern California. I believe that if we build this aqueduct we will see one of the greatest waves of migration to Southern California that has ever been experienced. Industry has got to get closer to its market.

I felt when I first came here that it was absolutely foolish to ship our cotton, leather, and other products to the East to be manufactured and buy them back after paying the freight both ways. Industry is going to come to Southern California if it has an assured water supply. There is going to be intensive development of the garden acre with the shorter hour day and the shorter day week. Thrifty people are going to want a place where they can put in their extra time and produce some of the things which they consume. No place is adapted like Southern California to that kind of development, where the growing season is 365 days in the year. After the War, I went to Europe and studied the little farms in and around Dresden and in Belgium and saw how they do it.

To talk about sufficient water being available in Southern California is foolish. Any place with only 15 inches of rain a year, and most of that coming in a couple of months, has not sufficient water to sustain values. Investments in Southern California are on water, and not land. There isn't any other city in the world the size of Los Angeles, but what is located on a living stream or the shore of a fresh water lake. Any other city of comparable size in the United States has at least twice as much rainfall, and most of it coming in the summer months when we don't get any at all. Any six months of what we go through would dry up the Mississippi River.

Those are the facts, men. You can check them. We have been drawing on our underground reserves. Water

can't be stored in open reservoirs with an evaporation of six feet a year off the top of it. In five years, and we have dry spells longer than that, you would lose thirty feet.

I know these things are true from my own experience. Any of you men can check them. I don't expect to make a dime out of the Colorado River Aqueduct that any of you won't make in your regular businesses. They wished the job of Director on me. God knows I didn't want it. They don't pay me a dime. Sometimes I wonder why I put up with it. If you would sit up in the office in my chair and listen to the politicians that come in all day long trying to get their hands in the till, and when they can't, bringing all sorts of charges against us, like this fellow broadcasting over the radio, you'd feel it isn't fair. We shouldn't be made to put up with it. If you men don't get behind us and get these politicians off our back, one of these days it's going to be just too much to handle and we'll turn the thing over to you.

Let me tell you men, if the politicians ever get their hands on this project, they will wreck the city. Then take the Hetch Hetchy project at San Francisco; that was started at the same time the Owens Valley Aqueduct was started. The Los Angeles Aqueduct is finished and now outgrown, and they are still working on theirs and the taxpayers are paying interest on over a hundred million dollars worth of bonds. Our rate for water is 13¢ per hundred cubic feet; theirs is 28¢ and now they have to buy water from Oakland to get through.

I tell you men, if we hadn't had that snow crop last year, you would have been pumping 80% of your water last summer with drastic curtailments, and you would have been compromised in the eyes of the world right at the time when the Olympics were here.

Of the water that was brought down from the Owens Valley, a hundred second feet was put on the San Fernando Valley, most of which was picked up again down below. The flow of the Los Angeles River was doubled. There are about 150,000 acres in the Valley, if you take in the foothills and the arms which have a conservative estimate of $2000 per acre including the towns - and Glendale and Burbank grew on the water they filched from the City - which have a value of $300,000,000. This is more than enough to build the Colorado River Aqueduct which will bring in 1500 second feet.

In all of the world, Europe, France, etc., they have been looking for productive investments in which they can safely put their money and know they are going to get it back. Here we have a self-liquidating project that is going to give you something that is worth the money. Work was started on the aqueduct nine years ago. Old Bill Mulholland saw the need for water and no one ever accused him of being an idle dreamer. If we had known then what we do now, it could not have been started at a better time to give employment and take advantage of the low trough of current prices. It will mean a great saving if we start the aqueduct now and build it with the prices that will be maintained for the next few years.

In addition to our experts, the engineers, economists, and financial experts of New York and the Reconstruction Finance Corporation went into the project most carefully. And on every phase of it, the need for water, the ability to pay for it, and so one, they satisfied themselves as to its merits. Their report was very reassuring to us.

I want to tell you men that it is up to you to get behind this project. It is your job, and you shouldn't ask us to give our time and take all this abuse. If you get behind us and keep the project on the high level that we have maintained so far, we will give you an economic and efficient job at a reduced cost in proportion to the reduction in your assessed valuation.

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Before the

VERNON ROTARY CLUB

January 11, 1933

Members and Guests of the Vernon Rotary Club:

1. In 1890 practically all of the good land in the United States was homesteaded. That marks the beginning of a new development in the sociology of the United States. It definitely marks the growth of big cities and the departure on a large scale of the people from the farms. This condition has introduced new problems into American life. Men cannot eat pavements and brick buildings or very few of the things that are produced in our factories under intensive division of labor.

2. The answer to the problem is a closer association of industry with the land. Describe interest in the problem; background of experience in San Fernando Valley and visit to War gardens of Belfium, France and Germany.

3. Describe conditions of the future when with shorter hours men will have more leisure for the cultivation of a garden acre; how industry will be corelated and supplemented with garden acre production in making a more efficient workman; take care of old age pension requirements; and stabilize the social and economic systems while eliminating the charity conditions created by depressions such as exist at the present.

4. Plan made difficult by high price of land adjacent to the cities due to unnecessary expenditure in the form of special assessments. Read the warning made in 1926.

5. Tell efforts to put the plan into operation; how an effort was made to have the banks donate land from frozen assets and met with failure. Read letter of contact with Federal Home Loan Board. Tell building program you now have in progress. Describe the operation of a typical garden in the San Fernando Valley.

6. Give reaction of Secretary of the Interior and from Mr. Henry Ford, and comment on the article which appeared in Collier's.

7. In conclusion read summary contained in the article entitled "The Right Way Out."

* * * * *

M E M O R A N D U M

January 17, 1933

The future of Southern California, its people and their investments, depends on what the intelligent, constructive leaders do today with regard to The Metropolitan Water District aqueduct. In some respects, the situation is similar to the occasion when Benjamin Franklin said, "We must hang together or we shall surely hang separately." Short-sighted and selfish forces are building up which are threatening in one way or another the successful completion of the aqueduct.

Nearly every one who has conscientioulsy and competently investifated facts with regard to water supply in Southern California, knows that it is inadequate. We have before us the evidence of continually lowering ground water levels locally and in the Owens Valley. We know of the salt water encroachments. We know of the disasters that have happened in the past because of lack of water. The uncertainty of the rainfall from year to year is known by every one who has lived here a few years or longer. We know that all of our property values are ultimately based on a dependable water supply.

Southern California's growth in the past has been remarkable but will continue. The primary element of that growth is unquestionably climate which will always remain a magnet to people living under the severe seasonal conditions of the North and East.

The health-giving rays of the sun are becoming ever more appreciated. People want their children to be raised in a healthful environment under the tonic of the sun with outdoor play throughout the year. The general superiority of Westerners in athletics is entirely explainable in terms of climate.

The factors that have created growth in the past have not been changed, and are, if anything, more vital.

During the last ten years, a period of restricted foreign immigration, Los Angeles was the only metropolitan city in the United States to double its population. In 50 years, Los Angeles has advanced in size from the 199th city in the United States to the fifth. The State as a whole, has advanced in 50 years from 24th to 6th. In ten years, the population of the State increased two and a quarter million, or a greater increase than any other State ever experienced in a census decade. The three Pacific Coast states

in the ten-year period from 1920 to 1930, recorded a gain of 47% in comparison with the 14% gain for the entire section west of the Mississippi, and 16.1% for the United States as a whole.

The United States in the last ten years increased its population by 17,000,000 persons, of which California accounted for 13.1%. It must be remembered that this was a period of declining birth rate and restricted immigration. The factors that brought about those increases have not changed, but are ever becoming more important.

California did not only gain in population. In State and National banking growth between 1920 and 1930, the gain in resources was 69.7%; the State as a whole in 1930 ranked third in the per capita banking resources with an average of $739.35 per capita.

During the period from 1910 to 1920, foreign commerce through Atlantic ports gained 288%, that through Pacific ports gained 458%. In the following nine years, the Atlantic commerce suffered a loss of 38% and the foreign commerce through Pacific ports increased 24¢. In 20 years, the Atlantic commerce gained 139% and Pacific commerce 591%.

President Roosevelt, a far-seeing Statesman, said some 25 years ago, "The Mediterranean era died with the discovery of America. The Atlantic era is now at the height of its development and must soon exhaust the resources at its command. The Pacific era, destined to be the greatest of all, is just at its dawn."

The value of the exports from the Los Angeles Harbor increased from $748,000 in 1915 to $161,000,000 in 1930.

Unquestionably one of the great factors in the future growth of California, and particularly Southern California, will be the aviation industry. In 1930, more than 12% of all the aircraft in the United States at that date, were in California and the State accounted for more than 18% of all the country's licensed pilots. In the same year, the State had 164 airports, which was more than any other State, by a big margin. As aviation becomes a more important factor in our national life, the greater commercial and recreational use of the airplane will give California an ever-increasing advantage.

In the ten years from 1919 to 1929, Pacific Coast States accounted for almost 16% of the total increase in manufacturing in the United States; the annual output of some 18,000 manufacturing plants aggregating $4,310,000,000. In 1930, California led all the other states with its retail sales, averaging $573.75 per capita. Los Angeles was the 6th among the cities of the United States in per capita retail sales.

In the value of farm products, California ranked second among the States in 1930; in the production of minerals, fourth.

The foregoing statistics are an adequate basis on which we can accurately judge the future. Fundamentals which brought about those gains, have not changed, but will become ever greater provided an adequate water supply is available.

In directing the work of providing such a water supply, the Board of Directors of the District have one primary purpose, which is to do the job in the best way possible; to do it as well, if possible better, than was done in the building of the Los Angeles Aqueduct.

In assuming their responsibility, the Directors need, and believe they have a right to ask, that all of the capable leaders of our communities who have the interest of Southern California at heart, stand behind us in this program. We cannot always expect to agree with these leaders on all subjects. There will be points of difference for one reason or another. These should, and in fact must, be dealt with on an understanding basis while the absolute unity in a common objective is maintained.

Among the members of the Los Angeles Citizens Colorado River Aqueduct Committee, a question has been raised as to the method of doing the work. Over a year ago, the District announced its policy of dividing the aqueduct up into convenient units and calling for bids on each one of them in the proper order, but reserving a decision as to the method to be employed until the bids had been examined and compared with the estimates submitted by our General Manager and Chief Engineer. After many unavoidable delays by reason of lawsuits, the work was started in accordance with that policy. Bids were received for the San Jacinto Tunnel and the contract awarded to the lowest bidder. In

awarding that contract, there was a division of opinion among the members of the District's Board. The different opinions represented two different schools of thought.

In this connection, I want to point out that in the four years in which the District has been functioning, practically every major decision has received unanimous approval of the entire Board. I believe that that is some kind of a record when it is taken into account that thirteen cities, large and small, antagonists on many questions, were involved. We are proud of the harmony and understanding which has been developed between Los Angeles and the outlying cities. In this respect alone, the District has already rendered a great service to all Southern California by breaking down to a large degree the mutual suspicion and distruct which previously prevailed. The progress made must be preserved by a policy of fair give and take.

Most of the Directors advocating the force account method, were from the outside cities. The conscientiously believe their interests would be best served by that method. When the second unit of the work came up for starting, the question of how soon the work would begin was important. During the election it was frankly said that the aqueduct would provide employment for many men. Under the present conditions of unemployment, the Directors did not feel justified in permitting any unnecessary delay. The fact that under the force account method the second unit could be started several months sooner, was an important consideration.

The starting of the second unit by force account, and calling for bids on the large units to follow, was a satisfactory and acceptable compromise to those members who were particularly favorable to the force account method.

The procedure has a distinct advantage, in that it will give direct comparison between the two methods, forcing each to its best effort and giving a constant check on their respective efficiencies. The fact that the District was to a certain extent organized to undertake any subsequent units of the work would also compel contractors to submit fair bids and to refrain from combinations created to fix prices by eliminating competition.

Also to be borne in mind and clearly understood is the fact that the carrying on of some of the work by force account gives a greater flexibility with regard to finances. While the Federal Government has agreed to advance

the District $40,000,000, to be used in two years, there always exists the possibility of unforeseen difficulties arising which might temporarily hold up the steady flow of runds. In that case, the portion of the work being done by force account could be curtailed without considerable loss. This would not be the case if all the work were being done by contractors who would have to be compensated for shutdowns.

The Directors of the District feel they mush have the present members of the Citizens Committee with them. If the Committee members disagree with any policy of the District, they, of course, have a right to object. We will be glad, in connection with the subject now under discussion, to have you issue a public statement that the Citizens Committee is opposed to the doing of any of the work by force account. That would place you in the clear. However, with regard to matters on which there is agreement, we should stand together and work for the common interest of our communities and Southern California.

At the present time, the District is undertaking a complete review and analysis of the entire project with a view to all possible economies and deferments that might be affected. While $220,000,000 were voted in bonds, the Directors of the District do not intend to spend a dime more than is necessary to furnish this area with a water supply in the quantity which it must have for present security and potentially certain future development. They want the assistance and support of the Citizens Committee in dealing with the problems which this involves.

The Directors of the District are faced with a tremendous problem and responsibility. The solution cannot be properly affected or the responsibility dealt with unless the distractions which ordinarily confront a public project, are eliminated. The designing and unscrupulous politicians and racketeers of every kind must be compelled to keep their hands off this non-partisan undertaking to supply our cities with an adequate water supply. It must be carried on purely on the basis of merit and efficiency. In helping us maintain the project on the high plain on which it has so far been carried, the Citizens Committee will render a service of inestimable value and one in every sense as great as that which the Directors of the District will succeed in accomplishing.

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REMARKS of JANUARY 24, 1933

The Metropolitan Water District of Southern California has received in cash $2,016,000 of the $40,000,000 credit advanced by the Reconstruction Finance Corporation for constructing the Colorado River Aqueduct. Work is now being started both by contract and by force account.

The Metropolitan Engineering Corporation was awarded the contract for construction of the San Jacinto Tunnel and within the past few days are reported to have qualified on their bond. During the current week the contract will probably be signed and they are expected to proceed immediately with the construction of that great tunnel sufficient in size to carry the full 1500 second feet through the San Jacinto Mountains.

The District's permanent headquarters building at Banning is nearing completion. Our General Manager and Chief Engineer, Mr. F. E. Weymouth, is rushing the construction camps at various sites along the base of the Little San Bernardino Mountains. In the near future, he plans to start actual construction on the Coachella Tunnels. Two thousand men are expected to be on the job in April, four thousand in June.

It has been a hard, long fight to get this great project under way. In these trying times we need the fighting spirit of the early pioneers who carved this empire of the Pacific Southwest out of the desert. If we can rejuvenate that fighting spirit, the strength, courage, and determination to carry on that they displayed, we will conquer the problems before us. In Southern California we not only have all the natural advantages that were enjoyed by the early pioneers, but the many other things that have been added by work and by science that make this the white spot of America. But we need that spirit of fight, and let us not forget that it isn't the size of the dog in the fight, but it is the size of the fight in the dog that wins.

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STATEMENT OF FEBRUARY 10, 1933

I am delighted to be able to announce that the Metropolitan Water District today accepted bids for its electric power conductors which contemplate the use of copper. The firms submitting bids for the use of copper were appreciably lower than their competitors. The copper people justified their right to business of the District on a strictly competitive basis. Looking at the question aside from any consideration predicated on price, or the technical advantages of copper, the Board of Directors of the District and myself in particular, is very happy that this business could be awarded to the copper industry which is a predominating activity of our neighboring states.

There is no question but that Southern California is intimately related to the other Western and Southwestern States in a unified economic structure. Between Southern California and Arizona and the other Western States, there is a constant interchange of products and services. We purchase from them copper, and other minerals, meat, dairy products and so on, and they in turn buy or manufactured products, our fruit, oil and patronize our recreational facilities.

The benefits and advantages resulting from the purchases by The Metropolitan Water District are not, however, confined to this and the adjacent area. Both directly and indirectly, the expenditures of the District for materials will help all parts of the United States. Were it not a requirement of the Reconstruction Finance Corporation that the District buy only American goods, it would nevertheless be the established and announced policy of the District. The Board of Directors, of course, is primarily interested in the people and concerns of Southern California. Our next interest is to California and its neighbors with whom we are so closely related economically, and then to the balance of these United States of America to whom we hope this project will afford a large measure of assistance in the recovery to normal times.

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MEMORANDUM

February 23, 1933

The policy of the District established over a year ago is to call for bids on each unit of the work as it is presented for construction. In the case of the Coachella Tunnels, the Board felt justified in departing from the rule, bearing in mind the humanitarian interest of putting more men to work at an early date and before the present winter is spent. For this and other reasons based on engineering, economic and financial considerations, Mr. Weymouth was authorized to build up an organization and acquire the equipment which any organization should have to obtain in order to proceed effectively on a job lasting so many years as this.

It is, in my opinion, imperative particularly in times like these when men and women need work so badly, that no misunderstandings or distrust should be fostered in connection with this urgently needed water supply project. On the various points of contention so far presented to the District, there have been equally sincere and able people alined on the opposing sides.

To the present, over thirty contracts for construction and for materials have been let and others are in the process of being let. With so much work proceeding under contract all along the line, the Board of Directors of the District will have excellent opportunities of constant comparison and can be depended on to take full advantage of any opportunity that will help finish the job at the lowest cost consistent with the importance of the structure and the interest of the taxpayers.

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Remarks Prepared for the Occasion of the

CONSTRUCTION INDUSTRIES BANQUET
March 16, 1933

Migrations follow depressions.

When business connections become broken, home ties are uprooted and people cast about for more favored locations in which to make a new start.

With the construction work on Hoover Dam progressing well ahead of schedule, with contracts for over $11,000,000 awarded by The Metropolitan Water District of Southern California for the construction of the Colorado River Aqueduct, with the Coachella tunnels being crowded ahead under force account by our Chief Engineer and General Manager Frank E. Weymouth, with bids to be opened in the next few days for several million dollars worth of additional construction, and advertisements now running for many additional million dollars' worth of contracts to be let, and other specifications ready to be advertised -- in the light of all this, the eyes of the Nation are on these two major projects - the Hoover Dam and The Colorado River Aqueduct.

Men of experience and ability throughout this Nation well know that an ample, dependable supply of water for Southern California, added to all the advantages of our location and semi-tropical climate, means not only the stability of our present growth and development, but it means new opportunities new development, new employment, and the creation of new wealth.

Our growth lies in the future and not in the past.

Twenty-five years ago Theodore Roosevelt said that the Mediterranean era died with the discovery of America. The Atlantic era is not at the height of its development and must soon exhaust its natural resources. The Pacific era, the greatest of all, is just at its dawn. Japan is prodding China out of her long slumber and China, in her humiliation, will turn to western ways and markets for a solution to her problems.

The Pacific Coast is the logical market for the trans-Pacific trade. Industry is going to follow its markets more closely than ever before.

There is now setting in throughout the older industrial sections and large eastern cities, a period of decentralization. Industry, today, is more concerned with the problem of its employees than ever before. Leaders of thought and action know that we have definitely come to the shorter-hour

and the shorter-day week; that the amount of wages paid is not paramount, but the economic problem resolves itself into what the worker can obtain for those wages. The vital question is: Where do we eat? How good is it? How dependable is it? What does it cost? And how comfortable are the surroundings? The answer lies in productive garden land going hand in hand with Industry.

Locations receiving the greatest consideration today are those locations where an unmonopolized growing market is available for expansion; where productive garden land is available for the employees profitably to utilize their surplus time; where there is an ample dependable supply of water, cheap hydro-electric power, a broad range of basic commodities.

The most important of these factors is water. In the past it has been the weak link in our chain. Certain as fate rainfall has failed us at intervals of years but not in a major sense since Los Angeles has been a great population center. Twice Lake Elsinore has dried up, but not in this century. Two noteworthy periods of drought have occurred which may come upon us again at any time, one lasting twenty-eight years and the other forty-two. Only with an acqueduct to the Colorado River of size sufficient to protect our people and their investments agains the uncertainties of weather can we live and expand with security.

The tunnels of the Colorado River Aqueduct are its controlling features. They should, in my opinion, be built as planned. The fact must be borne in mind that it takes two tunnels about twelve feet in diameter to carry the same amount of water which the sixteen foot tunnel, such as now being constructed, will carry. Furthermore, constructing two parallel tunnels will increase the length of these structures to be maintained from 85 to 170 miles, in addition to the much greater capital cost involved. The difference in cost between half size and full size tunnels is about $11,000,000, only about 5% increase being involved if the tunnels on the smaller line are built for the full capacity, which careful studies have shown will be required within economical time limits. In view of the importance of these features of the aqueduct to the future of Southern California, I have given them particular emphasis. In the features of the project other than the tunnels I favor the effecting of every possible sound economy. Prices of materials and construction efficiencies are very favorable to us now. Capital charges can and will be deferred, thereby keeping costs to a minimum pending receipt of revenue from the sale of water.

We must prepare for the future or forfeit our rights to advance. Southern California is inherently and fundamentally sound and with a sound and ample water supply will continue to grow. Within our limits are to be found the fundamentals which I mentioned before - unmonopolized markets available for expansion, productive garden land suitably located with respect to industry, cheap hydro-electric power, and a broad range of basic commodity activities. There is no place we know of where a garden acre will produce as much and as great a variety of food for the family, 365 days of the year, as in Southern California.

In the High Sierras there are 2300 lakes surrounded by mountain peaks of a greater average height than in Switzerland. Los Angeles has recently purchased the land largely controlling this scenic territory. It should be annexed to the City of Los Angeles and made a great park. These attractions are yet undeveloped and when fully realized and utilized will make this district more renowned as a summer playground than it has been as a winter resort.

New desert recreational possibilities will be opened up by the Colorado River Aqueduct. It is going to become more popular to bather under the beneficial rays of the sun in our deserts in winter than it has been at our beaches in the summer.

Southern California is becoming world renowned as a cultural center. Already it is the mecca of men and women famed in science, letters and the arts.

Modern invention has reduced the distance that formerly separated California from the rest of the Nation. Improved highways, highly efficient light speedy automobiles, the swift airplane and transcontinental railways striving to compete, plus a growing desire in the citizenry of this country to "see America first" are combining to bring about an unprecedented all-year-round tourist traffic.

All these natural advantages make for new growth and development - for balanced and well-rounded living.

Few of us have a true conception of the wealth-creating opportunities and possibilities of those great twin projects - the Hoover Dam and the Colorado River Aqueduct. The narnassing and controlling of the power of the Colorado River and the bringing of this life-giving water to Southern California assures that this section will be a self-sustaining economic unit, subsisting largely on its own growth throughout a long period of prosperity.

Already there is a shortage of single family houses. And this new desire for security and independence which is responsible for the back-to-the-land movement that is now taking place, is creating a great fundamental urge for more homes. Add to this the increasing desire of Industry to locate where potential and growing trans-Pacific markets are available, and the conclusion must be reached that the migration of Industry and population is headed directly to Southern California in ever-increasing proportions.

Let us therefore emulate the fighting spirit of the early pioneers who carved this Empire from the desert. Let us go forth from this day with new hope, new courage, and new determination to make this "new deal" win.

Southern California is the most favored part of the Nation and we should set the example, lead the way. This body of men should send the message of new hope, courage and determination to carry on back to Franklin D. Roosevelt, President of these United States of America.

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OUTLINE OF REMARKS FOR PRESENTATION AT THE
MEETING OF THE LONG BEACH REALTY BOARD

April 6, 1933

Mr.Chairman, Members and Guests:

I distinctly appreciate the privilege of your invitation, extended through Director Cook, to address you on the subject of The Metropolitan Water District. It is probably the livest question in Southern California today, if not in the entire country.

In connection with the recent earthquake, there are certain considerations related to The Metropolitan Water District which are particularly significant at this time, and which I want to point out.

First, let me commend you on the efficient and courageous way in which you dealt with the catastrophe. It was unquestionably an excellent example of emergency community organization.

As a result of the damage which the earthquake caused, there has gone forth throughout this country glaring and frequently exaggerated news items and pictures, both moving and otherwise, selected for thier spectacular value. The general effect of these things, which might in a sense be called propoganda, may be, as in a similar manner was the case in the Miami hurricane, to cause some to question the desirability of Southern California as a place to live. The only way, in my opinion, to counteract the vicious forces that have been set in motion is to do just as I am informed you are doing, and that is, to drive forward not only with the program which had been outlined previous to the earthquake, but with an even greater and more dynamic program. I am told that your beautiful city with its magnificent facilities for such things, is prepared to receive a rapid succession of conventions beginning immediately, with some nowactually in progress.

This same plan is in effect the one which is being followed by The Metropolitan Water District. Any hesitation, delay, or suspension of activities on the construction of the Metropolitan Aqueduct, which is being watched intently by every part of this nation, would immediately reinforce and substantiate the impression which may have been created by the propaganda I have referred to. Intense as has been our efforts to increase the amount of work under way, even greater efforts are being put forward at the present time.

In order that the entire nation may know that Southern California is not in the least daunted by the earth-

quake, a great celebration is being planned which will probably be held at Cabazon on the 29th of this month. It will be an occasion appropriately designed to commemorate the real starting of the work on the world's largest water supply system. Besides those representing the cities of the District, there will be thousands of people present from everywhere and speakers of national prominence will be on the program. Funds are now being raised to broadcast, over a national hookup, the main features, if not the entire program. I am sure you gentlemen will realize and appreciate how much that event, if successfully conducted, will mean to your City and the entire Metropolitan area of which we are all a part. On behalf of the District, I extend to you and all the citizens of Long Beach an invitation to be present and participate.

Personally, I am sold on Southern California 100 percent. I came here almost 30 years ago for reasons of poor health. As aoon as I got on my feet I began to investigate systematically and carefully the possibilities of this area. As a result of those studies I have made predictions and plans which, without exception, exceeded my expectations as to growth.

This is a land of destiny. Regardless of immigration, birth rate, and other factors we hear so much about, Southern California will continue to grow. It is one of those rare places of which there are very few in the world, where people want to live because they yield the fullest and most comfortable life.

A great deal of talk is heard from people of a pessimistic frame of mind who feel that the entire picture has been changed by the depression we are passing through. I don't agree with them. We still have everything we had before. Our attractiveness as a land of pleasant homes has not diminished. Only this morning the newspapers report that Mr. George M. Reynolds, who recently retired as the head of the Continental Illinois Bank and Trust Company of Chicago, is planning to move his family permanently to Southern California. The flow of population such as we experienced in the last census decade has only been restrained and dammed up. After the depression I believe we will have an influx of people equal to, if not greater than, any we have experienced heretofore.

History indicates that in many cases forces are set up during a depression which result in the migration of

people. There are many reasons for this, an important one being the breaking up of social groups and business connections, leaving many people free to begin over again, and in doing so, they look about for new younger and more vigorous places, where major developments are going forward. The locations receiving the greatest consideration today are those where there is an unmonopolized growing market available for expansion; where productive garden land is available for industrial and commercial employees to profitably utilize the surplus time which, with the modern tendency toward shorter hours, will increase as time goes on; where there is an ample, dependable supply of water for all purposes; where hydro-electric power is available at low competitive rates; and where there exists a broad range of raw materials, industrial possibilities and opportunities to manufacture a diversified number of basis commodities.

All of these factors are available in Southern California at the present time, with the exception of an adequate water supply. We have an unmonopolized local market that is growing year by year. Opportunities for international trade are increasing and will continue to increase. During the period from 1910 to 1920 the foreign commerce passing through Pacific ports gained 485%, while that passing through Atlantic ports gained 288%. In the following nine years commerce through Atlantic ports fell off 38% and that through Pacific ports increased 24%. In 20 years our foreign commerce of the Pacific Coast has gained 591%. The value of exports from this harbor increased from $748,000 in 1915 to $161,000,000 in 1930. With the awakening of the Far East, these figures should tend to increase rather than decrease.

In the opportunity to use productive garden land as an auxiliary to industry, Southern California is not excelled by any place in the world of which I have knowledge. The modern tendency to decentralize industry, made possible by modern transportation methods and systems, will foster the establishment of smaller industrial plants located in rural areas where the workmen will have the opportunity to utilize their idle time on garden homes located on lands near and surrounding the plants. These homes will make workmen more independent than has ever been the case before, by supplementing their income in the form of food supplied directly from their own gardens. These gardens will serve during the periods when industry is curtailed or suspended, as a means of livelihood to tie over the interval. Furthermore, the opportunity to produce much of the family food

requirements enables producers to retire at a younger age, with much less resources than would otherwise be the case.

The Hoover Dam will furnish a great additional supply of power to this area for the use of industries, particularly those of a basic character. And finally as to the production of commodities, there is no place else in the United States where, by reason of climate and the availability of diversified raw materials of high quality, that can compare with Southern California.

Therefore, the only factor lacking, as I said before, is that of an adequate water supply. No doubt many of you are familiar with the curves and charts maintained by your own water department, which show how the water levels have fallen in this and other portions of Southern California, and how the salt water has been steadily moving inland for many years. We will not be safe and secure until the Colorado River aqueduct is completed.

Recently a report was prepared which presented information concerning the amounts of droughts in Southern California which I found exceedingly instructive. It seems that in the past 150 years there have been two long periods of drought, the first lasting 28 years and the second 41. In both of those periods Lade Elsinore dried up completely, which it probably has not done within the memory of anyone in this room. The present subnormal period of rainfall has persisted for about 16 years. These 16 years, the Engineers show, are very similar in character to those which occurred in the early part of the droughts which I have mentioned. The significant thing is, however, that we have not had what might be termed a major demand upon our water resources since this area attained a population in excess of 100,000 people. In my opinion, every dictate of caution and good business management should impel us to drive forward this work with every possible speed consistent with economical and sound procedure.

At present the District has at work considerably more than a thousand people. They are being selected from among the citizens of our member cities who can qualify by residence and are competent to do the work.

Much of the work now in progress has to do with the preliminary features of the project. Hundreds of miles of roads, long pipe lines carrying water across the desert

to the job, power lines for construction purposes, telephone systems linking up the camps with the different headquarters, are now well under way. A large responsible contracting firm is at work on the San Jacinto Tunnel,the biggest single unit on the project. Forces engaged by the District are burrowing into the Little San Bernardino Mountains and are at work on the Coachella Tunnels. A few days ago bids were opened on two additional tunnels and I have preliminary information that fair prices and responsible bids have been received. Within a few weeks bids will be opened on three more large tunnels. Several thousand additional men will be on the job by summer. It is the starting of all these units that will be the cause of the celebration of which I spoke to you before, and at which I hope every one of you will be present.

There is just one remark I feel I would like to make in closing. When the project was formally started bonds were voted by an overwhelming majority to the amount of $220,000,000. The estimates which fixed the amount of bonds voted were based upon the trend of prices which existed prior to that time. On the basis of the new levels which can now be calculated as probably existing for the next five or six years, and by reason possibly of other savings, our engineers have reduced those figures to $179,000,000. This is a preliminary saving over the original estimate of over $40,000,000 and we have hopes of still further reducing the cost.

As to the policy of the Board in carrying out the work, I believe I can frankly say that every member has no other desire than to complete the project at the lowest possible cost consistent with our water requirements and the dictates of sound economics and engineering construction. Anything that can be deferred or postponed without departing from these principles, in my opinion, should be so dealt with. In fact, I have advocated that every part of the project except the tunnels, which are the determining feature throughout, be gone over with a microscope to determine whether any further savings can be made or have been overlooked.

From our short acquaintance with Mr. Cook, your Director on the Board of the District, I am sure you have every right to be confident that he will continue to insist that the Colorado River aqueduct be built in a hard-boiled businesslike way. Every employee must be selected on the basis of his qualifications; every contract and purchase made must be on the basis of fair competition and the merits of the product to be acquired.

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ADDRESS OF WELCOME AT CABAZON

May 13, 1933

Ladies and Gentlemen:

We are gathered here today on the desert slopes of the San Gorgonio Mountain Pass - out here in the southwest corner of the United States. As we look out across these vast mountain and desert spaces, we know that to the west of us, one hundred miles away, lie the cities of the Coastal Plain of Southern California, surrounded by their vineyards, their orange groves, their ranches and their factories. Looking back across the barren and rugged mountain and desert country stretching out to the eastward, we know that two hundred miles away is the great Colorado River wasting its precious cargo of water into the Gulf of California.

The strong-hearted and clear-visioned people of the thirteen cities in The Metropolitan Water District of Southern California have set under way the mighty task of bringing a portion of that Colorado River water across these three hundred miles of mountain and desert country to supply the increasing needs of our cities on the Coastal Plain.

We are meeting here today to set underway one of the most spectacular and important sections of this gigantic aqueduct project.

In bringing to the Coastal Plain of Southern California the flood waters of the western slopes of the Rocky Mountains which are carried down the mighty Colorado to be stored behind the Boulder Canyon Dam, now building, San Jacinto, that snow-capped mountain standing yonder, is the most formidable barrier.

Through the years it has been a challenge to the dreamers of this Project, and more recently to the Directors of The Metropolitan Water District of Southern California. Today we accept that challenge and under the capable and experienced leadership of our General Manager and Chief Engineer, Frank E. Weymouth, we are going to drive a 16-foot tunnel for 13 miles through the granite heart of that mountain.

We are going to drive 91 miles of 16-foot tunnels through the mountain barriers that stand between Southern

California and the Colorado River where we have procured an ample water supply for all time.

It will require 10,000 men laboring six long years to complete this job, the largest construction job going forward anywhere in the world today. It is only fair, however, to issue a decisive warning right here to every person within the range of my voice. The only men who can possibly, under any circumstances, secure employment on this job are men who have been residents of The Metropolitan Water District since September of 1930. It will be utterly futile, and certainly tragic, for anyone living beyond the boundaries of the District to come here with the hope of ever securing work on the aqueduct.

Down through the years to come, the precious snow water from the Colorado will be brought to this Coastal Plain of Southern California. Here, with ample, dependable supply of water, an abundance of cheap hydro-electric power, a new hope, courage and determination to carry on has been reborn.

New industry is finding new opportunity. Garden homes are multiplying in the fertile valleys, and with the shorter hour day, a happier and more contented citizenry will develop - dividing its time between the productive garden home and the factory.

On behalf of the Directors of The Metropolitan Water District of Southern California, I wish to welcome all of you who are gathered here today, and to assure you all that this twin project to the Hoover Dam, the greatest aqueduct ever conceived by man, will be rushed to completion to meet these growing needs.

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CALIFORNIA REAL ESTATE ASSOCIATION

June, 1933

Fifty-one million six hundred thousand dollars of work is now in progress on the Colorado River Aqueduct. In accordance with a sound economic program, The Metropolitan Water District of Southern California will extend its activities until the project is complete. Already completed is a very large percentage of the preliminary and auxiliary works in the form of roads, water systems, construction power lines, communication lines, camps and the like.

A month ago, on May 13, the District held a celebration at Cabazon which formally marked the beginning of work on the San Jacinto Tunnel, the largest single unit on the project. Practically simultaneously with the San Jacinto Tunnel, has been started work on sixty-one miles of other tunnels of which one section is being constructed by the District's forces, and the balance by contract.

These tunnels will have an ultimate capacity of 1500 cubic feet per second, or sufficient water for all potential requirements of the Southern California Coastal Plain until 1980.

While the project was undertaken solely for the purpose of supplying this area with an adequate water supply, it will also give employment to thousands of men during the severest depression in our history. If the steps toward the construction of this project taken back in 1924 had been directly for the purpose of relieveing unemployment, it could hardly have been more timely.

The money being expended at the present time, is being derived from the Reconstruction Finance Corporation which has expressed its willingness to purchase the District's bonds to the amount of $40,000,000. The estimated maximum number of men which will be engaged in the undertaking is about sixteen thousand and will represent an average of ten thousand during the six-year construction period.

In addition to the work being conducted by the District, there must also be borne in mind the construction by the City of Los Angeles and the communities associated with it, of the power line to Boulder Canyon, and that dam itself and the other related projects. Together these undertakings represent probably the greatest and most constructive program ever undertaken in any similar area.

While all features of these various projects are of the greatest importance in their respective areas, one of the underlying principles upon which the whole is predicated is the necessity for water. The dam at Boulder Canyon will conserve water which the aqueduct will convey to Southern California.

We are now approaching the summer of this year. The records clearly indicate that we have just added another dry year to the cycle of subnormal rainfall which has endured for sixteen or more years. Records indicate clearly that we may not be unreasonable in expecting it to continue for twice as long or even more. In the meantime we are faced with a continual diminishing of reserves, as all thorough Californians in their hearts must admit. Each succeeding year sees the water in the wells at a lower level. Along the coast, salt water is working its way inland ceaselessly. The fall of this year may see some communities and some valuable orchard areas faced with a critical water shortage.

The further continuation of drought and attendant consequences show more clearly than ever that the thirteen cities of The Metropolitan Water District were none too soon in iniating construction of the aqueduct.

To the future growth and development of Southern California the Colorado River Aqueduct is as essential as the air we breathe. We are now entering upon a new era of dynamic progress comparable in magnitude with any experienced in the past. The present value of real estate, the security of money invested in it, and the appreciation of its values depend unmistakeably upon an adequate and certain water supply.

For some time economists have been pointing out that the next period of our history will be one of industrial decentralization. Industries will move closer to their markets. Manufacturing plants will be smaller but more numerous and more widely dispersed. The long distance transmission of electricity at low cost, and the efficiency of our transportation systems have eliminated the necessity of concentrating industry into relatively small areas.

No place in the world is so ideally situated and adaptable to efficient manufacture as is Southern California. All of the elements are present: cheap hydro-electric power,

an abundant water supply in the progress of acquisition, extensive and diversified stores of raw materials and commodities, a growing local and international market, an abundance of low priced fuel, a large and contented labor market, and equal to any of the foregoing, a climate which permits continued production throughout the year at a high rate of efficiency and a low rate of cost and maintenance.

There is another factor which, in my opinion, is outstandingly in favor of this area in the industrial competition of the years to come. That is, with an adequate water supply, the abundance of highly fertile land which can be subdivided into units of approximately an acre where the working man engaged in industry can provide himself with a home and garden capable of supplying at least a part of his food requirements. A twelve months' growing season enables him to produce with a minimum expenditure of time and effort high quality produce for his table throughout the year. With the reduction of daily working hours and the hours of employment per week, the individual will in the future have more opportunity for garden home activities than has heretofore been the case.

With industries dispersed throughout this area, in each case surrounded by pleasant homes with productive practical gardens, we will have accomplished a restoration of a balanced economic system. The worker in such cases will not be solely dependent upon his wage. In times of depression and in old age, he naturally and with contentment falls back upon the products of the land and his accumulation of savings.

Real estate, now with the assurance of the Colorado River Aqueduct, will enter upon a new phase of development of the kind I have indicated. Those in the profession who are wide awake to the possibilities will realize the fundamental truths that I have indicated.

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CONFERENCE AT THE BILTMORE HOTEL

June, 1933

Industry is like an army, it moves on its belly. The primary questions of civilization are - Where do we eat? - How good is it and what does it cost? - How comfortable are living conditions? In this period of decentralization, industry is going to follow its markets closer than ever before. There is no place where the growing market possibilities should have more of an appeal to industry than in Southern California because with the possibility for economic feeding of a large population, the availability of raw materials, the assurance of cheap hydro-electric power and the existence of ideal living and manufacturing conditions.

When these possibilities are considered in connection with the million acre feet of water which will be brought to Southern California providing sufficient water for a million garden acre homes and a population of five million people, these garden homes later can be subdivided into five million lots, each accommodating a family of five, the amount of water mentioned being water adequate for the maintenance of such a development. To the careful observer it can readily be seen that this section has the most promising future of any place in the United States.

Let us examine the situation in its world-wide aspects. Twenty-five years ago Teddy Roosevelt said, "The Mediterranean era died with the discovery of America. The Atlantic era is now at the height of its development and must soon exhaust the resources at its command. The Pacific era, destined to be the greatest of all, is just at its dawn."

Now let us see what Franklin D. Roosevelt proposes to do with the world economic conference to be held in London this month. We understand that the proposal will be made to reduce the legal metallic cover for notes from 40% to 25%, of which 5% will consist of silver. There are at present approximately twelve billion dollars of gold in the central banks of the world. Under the proposed plan three billions of silver will be added, on the combined basis of which will be justified the issuance of sixty billion dollars of currency. This amount of currency is comparable to an estimated amount of fourteen millions at present.

The utilization of silver as the monetary unit will undoubtedly cause its price to advance beyond fifty cents an ounce thereby doubling the purchasing power of over half the population of the world, most of which is in dire need of the most compelling necessities of life.

Southern California is in an ideal position to get its share of that trade together with that of the silver using countries of South America and, in addition, it is in a position to take advantage of the opening up of the silver mines and in the increase of the raw basic commodities produced by agriculture. With the balance of the world so largely in debt to the United States, it would seem perfectly logical that they will agree to such a program because it means a lessening of their obligations to this Nation.

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M E M O R A N D U M

June 29, 1933

The Federal Government under the authority established by the National Industrial Recovery Bill, should advance to The Metropolitan Water District of Southern California an outright grant sufficient to cover capital charges until revenues are available from the sale of Colorado River water for the following reasons:

1. It would enable the District to depart from the economic schedule and justify starting work immediately on all parts of the project where practicable, thereby relieving unemployment and distributing purchasing power to the maximum extent.

2. The Colorado River Aqueduct project is organized with plans complete so that the accelerated program could be put into effect immediately. The increase in employment on the accelerated schedule would be 96,480,000 man-hours during the period 1933-1935.

3. Benefits of the accelerated program would be national rather than local because of the tremendous amount of equipment and materials which will have to be purchased from all parts of the nation.

4. The elimination of capital charges which might become an impossible burden on the taxpayers during the period of economic recovery, would permit immediate consolidation of all Southern California in a necessary water program by enabling areas not already participating to join. The aqueduct project is self-liquidating, financially and economically sound, and will supply an absolutely necessary water supply for an area of over 1400 square miles including over two and a half million people. Nine years of thorough preparation are behind the project, and it was supported by the people to the extent of a five-to-one vote on its bond issue.

5. It will insure the success of the Government's program being carried out under the Boulder Canyon Project Act. That program is far ahead of schedule and the aqueduct project which will consume a large portion of the power to be sold in repayment of the cost, must be coordinated and synchronized with it.

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M E M O R A N D U M

July 25, 1933

Noone who has conscientiously studied the water problem of Southern California and who has the interest of this territory at heart can deny that a supply of water from an outside source is not absolutely necessary.

As to local water supply, it is just a matter of time until it is exhausted. There are at present 130 square miles in area in which the supply is critical; 223 square miles, much of which is in Long Beach area, in which the water level stands at or below sea level. Over 41 square miles are already effected by salt water. These depletions have taken place in a period when climatic conditions were not far from normal.

In our history there were two periods of drought which exceeded anything which has occurred since Los Angeles has had in excess of 100,000 people. Since the first of the century Lake Elsinore has maintained its level in spite of increased diversion. Two times in the preceeding century that lake was known to have dried up.

Our present water supply situation is not a question of providing a supply to meet the future, but of obtaining one that will take care of the present. Conditions in Long Beach, with its harbor and ambitions for industrial growth, are particularly critical.

There have been from time to time rumors that certain elements in Long Beach would like to withdraw from The Metropolitan Water District. In this regard, it must be pointed out that any city withdrawing shall continue taxable for the purpose of paying bonded and other indebtedness outstanding or contracted for until such obligations have been satisfied. The District had outstanding on June 29 contractional debts to the amount of fifty-eight and one-half million dollars. These amounts are increasing very rapidly at the present time. Reference to this situation is not made with any intention of intimidation, but simply by way of calling attention to something which every serious-minded resident of Long Beach must take into account in considering his attitude toward the District.

We are at present in the middle of one of the most acute periods of economic distress and unemployment the nation has ever known. There are 100,000 families in the County of Los Angeles alone who are receiving public aid in some degree. For the relief of unemployment in Southern

California, the District represents the soundest and best possibility. On this project menwill be employed and at the same time create an essential public facility.

The employment on the project will be distributed among the member cities in the proportion of the contribution of each. Long Beach at present has 169 men employed on the aqueduct, which represented during the month of June a payroll of over 18 million dollars. During the peak of construction on a normal program this will increase to about 1100 or more. It may be pointed out in this connection that should Long Beach withdraw from the District, undoubtedly all those employed on the project would find it necessary to move into one of the other member cities. Also there would move to other cities of the District all those who have reason to desire or expect work on the project. Those close to the situation state that a considerable movement of population is at present taking place from non-member cities to member cities of the District in the expectation of obtaining employment.

From time to time reports have been circulated by individuals or others with regar to the cost of the aqueduct to the cities, contending that it would be excessive. It has always been recognized that during the early years in some instances it might be necessary to meet the cost by taxation. After the construction period is over and the aqueduct goes into operation the engineers show that the revenues from the sale of water will rapidly eliminate all necessity for contributions from any other sources. Steps now in process of negotiation by the District make it conceivable that interest during the construction may be eliminated if not entirely, to a large degree.

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M E M O R A N D U M

August 1, 1933

The main aqueduct from the Colorado River to the Cajalco Reservoir is going to be 341 miles, of which 91 miles will be tunnel 16 feet in diameter. In addition, there will be eventually 236 miles of distributing lines of large sizes.

Among some of the major items of materials entering into the construction will be 41,000,000 pounds of powder, 6,000,000 barrels of cement, 780 carloads of steel, and 35,000,000 board feet of timber.

On a normal program between now and October, 1935, the District will expend sixty-three million dollars. If the work is speeded up, as it has been proposed, in order to provide additional employment and expand the consumer's purchasing power in cooperation with the President's program, one hundred thirty-seven million dollars will be spent in the same period. This can be done economically and in accordance with sound principles, providing the District obtains from the Federal Government a 30 percent grant such as is authorized under the terms of the National Industrial Recovery Act. A grant of 30 percent of the expenditures for labor and materials during the period between now and October 1935 will be twenty-four million dollars. It is hoped that this grant, instead of being expended directly on construction, can be set up as a credit to the District agains the payment of capital charges on the money which the District will borrow from the Federal Government. This would mean that the member cities of the District would not have to contribute by taxes or otherwise towards the maintenance of the project until revenues become available from the sale of water. In other words, the burden on the taxpayer as far as the District is concerned will have been practically eliminated.

There are employed on the project at the present time 2400 men, exclusive of those working on Pine Canyon Dam which will be acquired by the District. On the accelerated program referred to, a maximum of 17,400 men will be at work on theproject during the years 1934 and 1935.

We firmly believe that no other project in the United States is in such a sound position as is the Colorado River Aqueduct of the Metropolitan Water District. The undertaking was started nine years ago, and was not "cooked up" to take advantage of the opportunity to obtain federal funds. Sound engineering, thoroughly checked competent engineering boards, was completed before the work was initiated.

The economic basis upon which the project was conceived was the absolute and imperative necessity of obtaining additional water supply for Southern California as soon as practicable. The condition of the underground basins, the trend of population to this area, the industrial and commercial expansion assured of the future, make certain to any fair-minded individual the necessity of importing water from the Colorado River. It was not a question of building for the future, but of taking care of the immediate need for more water, as well as making provision for supplies on which a continued development could be predicated.

The wealth of the cities comprising The Metropolitan Water District is ample to warrant the expenditure. When the water becomes available it will be sold in sufficient quantities and at fair prices to meet all capital and operating costs of the undertaking.

The experts of the Federal Government, under the Reconstruction Finance Corporation, which was very conservative in its loans, classified the District as a sound, self-liquidating project.

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SUCCESS BOND

STATEMENT AT MEETING OF BOARD

September 15, 1933

In the death of John G. Bullock California has lost one of her greatest citizens.

For the past four years Mr. Bullock has served as a member of the Board of Directors of The Metropolitan Water District of Southern California. The debt which the District and the people of the District owe him for the public services he has rendered in that office never can be repaid.

Serving without one penny compensation, and at a tremendous personal sacrifice to his private business affairs, he devoted weeks and months of his time to the successful solution of the District's most complex and important financial and governmental problems.

Mr. Bullock was chairman of the special bond committee which negotiated with the Reconstruction Finance Corporation for the sale of Colorado River Aqueduct bonds to that Federal Corporation. The District's success in consummating this tremendously important agreement largely is due to the untiring efforts, the powerful leadership, and the devotion to public duty of Mr. Bullock.

As Chairman of the Board's Committee on Public Relations, Mr. Bullock has insisted that the taxpayers and the public generally are entitled to know all of the facts all of the time relative to the plans and the progress of District affairs. He was at the head of the District Bond Committee and the Los Angeles Citizens' Committee which presented the $220,000,000 aqueduct bond issue to the electorate on September 29, 1931.

The overwhelming manner in which the people approved this great bond issue by a ration of five-to-one will serve forever as a shining tribute to the public confidence in Mr. Bullock's unquestioned integrity and faithfulness to the highest interests of the people.

The Board of Directors of The Metropolitan Water District joins with the people of the entire Southland in extending heartfelt sympathy to the family and close business associates of Mr. Bullock.

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TAKING STOCK OF THE METROPOLITAN WATER DISTRICT

September 28, 1933

Mr. Chairman, Members, and Neighbors:

Five years ago this coming December, The Metropolitan Water District of Southern California was irganized. These five years have been very strenuous ones for the entire Board, and in all frankness I can say that they have been particularly strenuous ones for me as its Chairman.

In that period great economic and social changes have taken place. We find ourselves in the midst of the greatest depression with all its suffering and worry, that the world has probably ever seen. Even in normal times the undertaking of a project of the magnitude of the Colorado River Aqueduct is a tremendous undertaking. Strange as it may seem, it is nevertheless a fact that at the time when the people need work most it is hardest to provide jobs for them. Today we have 2700 men at work on this project and hope by the first of the year to have 7,000. It's an uphill climb but one that is worth the effort.

With the project safely launched and sailing into the open in the midst of unprecedented world-wide economic storm, it is an excellent time to take stock of the situation in which we find ourselves. This is my only justification in coming before you again. Briefly I propose to look over the way we have come, and take stock of the past and size up, insofar as we may, what lies ahead.

The history of the Metropolitan Water District concerns just one thing, and that is water. The unusually dry year of 1924 focused the attention of Southern California on the fact that a growing population such as Los Angeles must have an ample and dependable water supply. After five years of effort, the plan to bring in additional water supply from the Colorado took the form of a league of cities working together for the common good of all.

Just at the time when the bonds had been voted and the aqueduct project was prepared to start, the depression which had been bad enough up to that time, broke out in earnest. The general paralysis of the financial world made it impossible to finance even the best and soundest of projects. Then the Federal Government stepped into the scene and provided funds through the Reconstruction Finance Corporation and now through the Public Works Administration, is engaged in even greater efforts to stimulate sound public construction. That, in outline, is the situation.

We are inclined to ask ourselves, "Have the considerations which brought The Metropolitan Water District into existence and five years along the road, changed so as to justify a different setup?" I believe not. In the first place, the primary consideration that Southern California must have an ample and dependable water supply is more important today than ever in the past. The last five years have only added that many to the period of drought which has persisted now practically unbroken since 1916, or for seventeen years. Our researches reveal that droughts similar in every respect to that of the past seventeen years have persisted for 42 years. With our present population and development in this area, a drought anywhere near that prolonged would have disastrous consequences compared to which the sufferings of this depression are negligible.

I believe all of you in this room are thoroughly familiar with what is happening to the underground supplies upon which we built our city. It is the story of empty wells and salt water encroachments. Just the other day a man came into my office from one of the high value citrus areas just to the East of Los Angeles. He said he represented a small water company supplying a small municipality and a considerable area planted in oranges. The farmers in that area had been making application to the Federal Agricultural Credit Agency and had been turned down. The reason given, he told us, was that the Government investigators had reported that wells did not constitute an assured water supply in Southern California, and one upon which sound loans on farm lands could be predicated.

There is, in my opinion, not a single area in Southern California that is safe against the common threat of drought, and in that statement I include the San Fernando Valley, dependent as it is upon the snows and rainfall of the High Sierras.

Some raise the question, "Can we afford the water?" I say we can't afford not to afford it. Unquestionably the cost will be great; but not more than can be paid. The original cost estimate of $220,000,000 has been reduced to a little over $200,000,000 and I am hopeful and expectant that it can be cut much lower.

As to the cost of the water, great masses of data, statistics, and piles of engineering reports have been accumulated. When the brush is cleared away, I see a few significant facts. The cost of taking the water out of the Colorado

River and delivering it in Southern California, including all of the elements of operation, maintenance, and capital charges, will at the maximum be approximately, let us say, $25,000,000 a year. The aqueduct will have a maximum capacity of about a million acre feet a year, or a cost of about $20 an acre foot. Suppose, without changing the other figures, only half the amount of water, or 500,000 acree feet are sold, still the price would be only $40 an acre foot. This compares with a present domestic rate in the City of Los Angeles of 13¢ a hundred cubic feet, or nearly $60 an acre foot. The average of over a hundred large cities in the United States is about 18¢ a hundred cubic feet, or nearly $80 an acre foot. I think those figures will satisfy anyone thoroughly familiar with the conditions in Southern California.

Of course, a great many hypothetical setups can be made based on financing the project through the sale of water or on some basis involving taxation, but the fact remains that if half the capacity of the aqueduct is sold at $40 an acre foot it is sufficient to pay the maximum annual cost involved in the construction and operation of the aqueduct.

Now as to the future need for water. Even if we never grew by the addition of another person, the aqueduct is justified because our present development and growth are insecure without it. In the flow of years it is only a matter of time until a dry cycle would bring the desert back across the mountains.

But I believe we are going to grow. I think there is more reason now to believe that greater growth is in store for us than at any time in the past. Every year California converts more of those dwelling in the alternately frozen and torrid conditions of the East to our mild climate which makes life fuller. The Olympis Games sent the message to the world. We are becoming more and more an outdoor people. Aviation will make us more so. All of which means a greater population pressure in the direction of Southern California.

With a restoration of normal conditions, the flow of people to Southern California will begin again in an ever-increasing stream. The changes which have been wrought by the current depression in our social and economic lives, will break down many of the ties which formerly kept people from moving. The old order is gone and people are seeking new combinations and associations.

Probably one of the most significant factors in the potential growth of Southern California is the current movement of decentralization which is taking place in industry. That the people who come here must have employment, we all know. That employment must be provided by the building of an industrial system. During the past ten years we have observed the movement of the rubber, steel, automobile and other industries into Southern California. These big concerns realize they must get closer to their market.

In the future, industry will be intimately related to rural development. Highly efficient transportation systems and electrical power make it possible for industries to locate wherever it is most economical to operate. As a result, we are going to see manufacturing plants distributed throughout the rural area adjacent to large cities, and we are going to find their workers living on small garden places of probably an acre in extent.

Recently there appeared in the Christian Science Monitor an article setting out the possibility of such a development in the San Fernando Valley. In my opinion there is no place in the world so ideally adapted to the type of industrial development that I mentioned as this immediate area in which we live.

The power that industry will need in Southern California will come from Boulder Dam. The Colorado River aqueduct will furnish the water which they and the populations depending upon them must have. The rest of the picture is inevitable and is now in a process of evolution.

A consideration which has heretofore restrained industry from coming to Southern California has been the fact that we have always in this State insisted upon a higher standard of living than any other area. With the putting into effect of the President's program of codifying the industries, we will find an added impetus given to the locating of industries in Southern California. We have never been able to compete with the South and the other industrial centers of the Nation because we long ago banned child labor, long hours, and the sweat shop processes. The 1930 census shows that the manufacturing and mechanical industries of the Pacific Coast in that year employed fewer than one thousand persons between the ages of ten and fifteen. With less than twice the population, in the South Atlantic area the same group of industries employed twenty thousand workers of that age, and New England with about the same population as the Coast, nine thousand. Only 21.8% of the factory wage earners on the Pacific Coast were on a working week of more

than 48 hours, as against 70% in the Southern States, and 53½% as the National average for factory employment. We were lowest of the nine geographical areas. With social conditions in the other parts of the country placed on a par with the Coast, we are in a position to give other areas of the Nation odds and still beat them in attractiveness towards the efficient operation of industries.

I believe, gentlemen, that a review of the past five years and a frank analysis of the future reveal that Southern California more than ever needs the Colorado River aqueduct and I see nothing in the picture to indicate that we shall not be able to meet the obligation in a fair and reasonable manner at the proper time.

I have a reel of motion pictures showing you the work now in progress being carried on by the District's own forces in what is known as the Coachella tunnels which lie in the Little San Bernardino Mountains just north of Indio.

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MEMORANDUM IN CONNECTION WITH ENGAGEMENT TO SPEAK

BEFORE THE CHAMBER OF COMMERCE OF SANTA MONICA

December 18, 1933

Never, in my opinion, has the future of Southern California held such tremendous possibilities. I make that statement on the basis of almost thirty years of residence in Southern California. During that period I have seen Los Angeles grow from a good-sized town to the fifth city of the Nation and one of the largest in the world.

The experts on population, when they look at the successive Federal census reports of this area, are in very much the same frame of mind as the Irishman who said when he saw the elphant: "There ain't no such animal."

As remarkable and, in fact, astonishing as has been our growth and development in the past thirty years, I cannot help but feel that the future has in store still greater achievements. This may sound like extravagant optimism in view of present economic and social conditions but at least in my own judgment, I feel I have taken present circumstances into account.

Greeley's advice to the young men of the past century to go West seems to have been passed on to the sons and daughters of the succeeding generation. The migration to California, and particularly to Southern California, which has been taking place has, during the past three or four years, only been retarded and in fact, as it were, dammed up.

Dr. Ray Lyman Wilbur a few years ago in conversation indicated clearly to me that he understood the situation which existed and the forces which were operating to bring people to the West. He said that there were two mighations going on in the world at the present time - one of the Chinese into Manchuria and the other of Americans into Southern California.

Even though I frequently lead people to believe that I am a Californian and over-sold on our climate, as native sons and adopted native sons have the reputation of being, nevertheless my opinions and conclusions are not based on my optimism and enthusiasm. My approach to the problem has been rather scientific and cold-blooded. I have made it a practice to circulate through the East contacting people in all walks of life as to their attitude toward Southern California. The results of these investigations reveal conclusively that there is a tremendous magnetic force turning people's minds and eyes to Southern California.

This desire of people throughout the entire Nation to live in Southern California completely refutes the contention made by some of our high-sounding so-called population experts who, as similar experts have done in every age, are shouting that the population of the Nation is becoming static. Regardless of what happens to the population as a whole, Southern California will grow on the redistribution within the Nation.

A great deal could be said on this subject, but I will only point out one or two things. During this depression there has been a general disruption of the social as well as the economic structure. People who were wealthy before 1929 are now in many cases only of moderate means. Many can no longer live among the social groups to which they have become accustomed. In casting about to re-establish themselves, they naturally look to new and more promising areas. It is from this group that Southern California will draw a great part of the funds on which it will grow during the next decade or so. As Chairman of the Board of Directors of the District, I have frequent occasions to contact businessmen who are looking for new opportunities to enter their specialized field.

Another factor which I have followed closely since the War is the decentralization which has been taking place in industry. With modern transportation systems and the availability amost everywhere of unlimited quantities of electric energy, industry no longer finds it necessary or economical to confine itself to enormous establishments located adjacent to a waterfall or to the coal regions. This decentralization is going to exert a tremendous influence on a new type of living and a new social system, which no place in the world is, in my opinion, so adaptable as Southern California. That is, briefly, a scheme whereby the industrial worker lives on a small plot of ground, probably an acre in extent, and divides his time between producing part of his food requirements and his work in the factory.

The success of the application of mechanism to industry has already been carried to the point where it is no longer necessary, in order to produce all that can reasonably be consumed, for men to work as many hours as formerly. The shorter hour day will leave more time for the worker to devote to the healthful outdoor activity of cultivating his own garden.

My views as to the growth of Southern California, I believe, are well borne out by the industrial experts who regard this area as the logical producing center for the international commerce with South America and the Orient which will naturally take place when present economic conditions have been eliminated.

The foregoing remarks have been made leading up to the question of water supply and the Colorado River Aqueduct. The lack of water has always been present and has always been the fly in our ointment. The real fight in the development of Southern California has been on this question of water. Step by step, from the very first settlers down, men have fought with Nature and with one another over this indispensable necessity for life and growth.

In constructing the Colorado River Aqueduct, our problem is not primarily providing water supply for the future, regardless of how confident we are that great things are in store. Our first consideration is protecting the existing development, which has exceeded present water resources even in normal years. However, we are periodically subjected to long droughts which multiplies the seriousness of the situation. As far as water is concerned, practically all of our eggs are in one basket. With the exception of Los Angeles, all of the cities in Southern California depend on local rainfall. Los Angeles is not much better off because rainfall conditions in the Owens Valley are governed by the same climatic forces which produce the local supply. It is therefore essential that in obtaining our water requirements we must tap a source independent of the vagaries and uncertainties of California coastal rainfall. This requirement is admirably met by the Colorado River which drains some 240,000 square miles, including the perpetual snows of the Rocky Mountain chain.

At this point summarize progress of the District:

1. Its organization
2. The bond election
3. The extensive preliminary work preceeding the start of construction.

4. Financing from the R. F. C.

At this point conclude with a summary of what has been done and the progress that is being made:

Contracts let
Miles of tunnel under construction
Number of camps built
Number of men employed
Miles of road, telephone lines, power lines, and water lines

Conclude with progress of construction as related to Boulder Dam.

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ANNUAL MEETING OF THE SOUTHERN CALIFORNIA CHAPTER

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

UNIVERSITY CLUB - LOS ANGELES

January 11, 1934

The construction of the Colorado River Aqueduct has now reached the point where one can stand off and look at the progress which has been made. On the whole I feel that I can say the view is generally gratifying and significant. My impressions are based not only upon my knowledge of the project as Chairman of its Board of Directors, but also upon my personal observations of the men, camps and working methods judged as any other citizen visiting the work. A great many of my week-ends since the construction first began have been spent in the field.

In addition to my own impression, gained by thousands of miles of inspection trips, I have received unsolicited comments from many in all walks of life who have inspected the work now in progress. Recently while going over the aqueduct line, I learned that John Hays Hammond had spent the previous day with some of our engineers and had gone into one or more of the tunnels in the Coachella Division. Subsequently in correspondence and from his statement to the press which probably many of you saw, he told of the phenominal development which has taken place in tunnel driving equipment and methods during his life as an engineer and commented on the obvious efficiency with which the project is being handled. He made the observation that the District is driving a thousand feet of tunnel a month, where in his early days in South Africa the equivalent would have been sixty or seventy.

The basic principle upon which the Board of Directors of the District operates can be summed up briefly as the determination to build the project efficiently and economically in accordance with the best technical knowledge available. I believe we are succeeding and know that the contracting fraternity has supported us in our efforts. The work is at present proceeding on 82 miles of tunnel. In addition there are 9 miles yet to be started on the main aqueduct for which bids are now being called; 58 construction contracts have been let to date. Of the 82 miles of tunnel under construction, the District, as probably all of you know, is driving with its own forces 26 miles. We are giving you some good clean competition on that work and I am told that our results are as good or better than yours.

The most significant recent development was the granting by the Federal Government of $2,000,000 towards the construction of Parker Dam. As those of you who are familiar with the project know, the most economical and satisfactory time for building the Parker Dam will be while the flow of the Colorado River is being accumulated behind the rising Boulder Dam. This work should start very promptly,

The amount of construction activity which the project could economically provide is much greater than the present volume. For the past six months we have been presenting vigorously to the Public Works Administration the number of men who could be employed and the general benefits to accrue to construction, manufacturing and other lines, if the District's application for approximately 60 million dollars were approved with the 30% grant provision included. Some of you men have helped us generously. So far we have not been successful though we did receive the $2,000,000 for Parker Dam which I mentioned previously. Eventually we are certain to succeed. In a large scale public construction program such as the President favors, projects of the financial, economic and social soundness of the aqueduct are going to be at a premium. The Colorado River Aqueduct was not started to get federal money while the getting was good. We were on the way long before the depression. The need for water is an absolute growing necessity. The money advanced to us is secured by one-third the assessed valuation of this entire state. Only under abnormal conditions would it be necessary for us to seek financing through any but the normal channels under favorable terms. If the Government extends its credit to the District it need not be concerend about the return of its money with interest, nor of embarrassing political scandals of waste and misappropriation. I confidently believe these facts will be recognized during this session of Congress and that in due time the District will be able to proceed with the work to the fullest extent economically justified.

During negotiations with the Public Works Administration it seemed for a time that regardless of the merit of the project, our application would be denied on the ground that California had obtained more than its share. While California has received a considerable volume of Federal money, it was very largely in the self-liquidating classification, repayable with interest. In order to arrive at the true economic facts concerning loans to California, our engineers made an analysis of the distribution of expenditures which the District

would make. These studies revealed that more than 50% of the money loaned to a construction project such as the aqueduct must necessarily be expended in the East, largely in the purchase of materials and equipment not produced locally. The studies of the engineers were incorporated in two reports which were presented by Mayor Shaw to the President, Secretary Ickes, and others at the time of his visit to Washington as a member of the committee initiated by the Los Angeles Chamber of Commerce. This was followed up later with a general distribution by the District to those concerned or interested.

Personally I believe that the distribution of these reports started by the Mayor, resulted in the District receiving the appropriation for Parker Dam. I look upon it as a great victory forSouthern California.

At a meeting such as this it is customary to make predictions about the future. The contractors, like everyone else, want opinions as to the prospects for business. However, so many people in high places have, druing the past four or five years, lost their reputation as business forecasters, that the practice is not as fashionable as it used to be. The American attitude has been to want to hear the good but not the bad. One of our favorite expressions has been "Be a Booster, Not a Knocker." Be this as it may, I am still among those who have confidence in the future of this country, and particularly in Southern California.

Nature has given us everything, but one, that we need to make in Southern California the greatest civilization which has ever existed, almost regardless of whatever happens elsewhere. This delightful sea and desert environment will continue to be a congregating place for people from everywhere, particularly successful people. More people mean building and construction and the things that go with it. The one thing we lack is, of course, water. Freak storms may almost drown us out, but the years taken in and out are always dry or drier. With the coming of the Colorado River water our one great deficiency is eliminated. I am confident in my own mind, and feel that the evidence justifies that confidence, that in the immediate years to come we will see the beginning of a popular movement into Southern California and a growth and development here that will exceed anything that has occurred in the past. I hope you are all here to have a share in that business.

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ON THE ANNIVERSARY OF THE

FOUNDING OF VAN NUYS

February 22, 1934

On the wall of my office hangs an old photograph which is among my treasured possessions. Many of you have seen it. It is a panoramic view taken in 1911 during the founding of Van Nuys. From a photographic standpoint it is not a particularly good picture, but for me it has associations and memories of great value. To a newcomer in Southern California it would only show a lot of queerly dressed people and a few very unpretentious buildings located on a dusty street corner. Beyond the buildings the eye can discover no development, only an empty plowed field.

Since that picture was taken we have come a long way. The horses and wagons, the mustaches and derby hats and the full and flowing skirts indicate the changes that have taken place in dress in the 23 years that have elapsed. Whether our present fashions can be called improvements or progress is a debatable question, but as to the progress and growth of Van Nuys and the San Fernando Valley there can be no question, especially after looking at my photograph of a few buildings on an extensive plain. Now as we look around us we see a city worthy of the name - a pleasant place of homes nestling in green and shady gardens. Where one person lived in the valley in 1911 there are now hundreds; where then there was a struggling village or two in the midst of a great plain, there is now an unbroken land of garden homes stretching to the encircling mountains.

Delightful as it is to reminisce on what has been, it is still more fascinating and significant to look at what is to be. As far as the San Fernando Valley is concerned, there is, in my judgment, no question as to what the future holds. The things that have brought people to us and created the wealth and values of the Valley are now operative and will continue to be so to an increasing extent in the years to come.

If we analyze the forces behind our growth and strip them of the fuzz with which they are usually covered, we find them to be climate and water. The climate affects us in two ways. First, it has created here a place in which it is delightful and comfortable to live; and second, it has directly and indirectly made it possible for people who come here to stay and make a living. Humankind since time began has always sought those places of mild climate which

yielded them the most comfortable and enjoyable existence.' Between the perpetual snows at both ends of the world and the oppressive heat and dampness of the tropics are to be found in a relatively few places that combination of mild climate and productive soil which seem to best answer human needs. In most cases they are adjacent to the desert.

I have named climate first as the factor which brings people to Southern California. I think that is probably its proper place. The fact that the Palm Springs resorts, in spite of high prices, are sold out even during depression winters, and the activities of the extremists who today are going in for nudism are manifestations of its growing importance in human affairs. The direct health-giving rays of the sun are a part of what climate contributes to human happiness. During the past thirty years one can readily observe a growing appreciation of the benefit of the sun's rays and people everywhere are coming to realize that life is not only longer in Southern California but it is richer and happier.

I have said that humankind has always sought such places as Southern California. When the barbarians made their great migrations from central Asia down into the lands bordering the Mediterranean they probably were not primarily interested in climate or a more comfortable place in which to live. The force that drove them out of their established homes and lands was the primitive need for food. When the droughts came and the grass dried up and their herds and crops perished, they had to go elsewhere for food or starve. They came out of necessity but invariably stayed. We have learned from the development of science how to overcome the conditions which compel people to migrate in order to satisfy their hunger. Our inventions in transportation make it possible to bring food from wherever it is grown to all parts of the world. Engineering skill enables us to bring water economically hundreds of miles from abundant sources to where it is needed both for human consumption and in the growth of crops. We have become much more independent of one environment than formerly. Therefore when people look to Southern California as a place to live, they do so with a selective eye comparing its advantages with those elsewhere. Here lies the strength of our climatic appeal.

As to the second important factor which will bring people to Southern California, and particularly to the San Fernando Valley, is the question of water. While the climate will create in the minds of people living in

lands of brutal, bitter winters the desire to live in Southern California, water iw the element which makes this possible to other than a favored few. Without an abundance of water existence in this sunny land would still be possible, but there could be no economic foundation upon which to build a great community. People must not only live but they must find an opportunity to engage their skill and energies in providing for themselves and their families the necessities and luxuries of life. With an abundance of water a great industry can arise giving employment to many thousands in producing the great diversity of commodities represented in the markets of today.

Industry in turn will make possible commerce and the exchange of goods with the balance of our own nation and with foreign countries which in turn will provide employment for added thousands. With the growth of the population made possible by opportunities for employment there will be provided work for a great multitude engaged in serving others in building homes, streets, and utilities, and in recreational and entertainment activities.

But there is one other factor in the economics of Southern California to be mentioned. That is, of course, the land which is the source of our food supply. Here is a respect in which Southern California especially excels in its ability to attract more people. In addition to our climate, in addition to the opportunities which exist and are growing for employment in industry and commerce, we have some of the best and richest soil to be found, capable of producing an almost unlimited diversity of products through all seasons of the year. The products of the land constitute a backlog to all other forms of economic activity. Los Angeles County is reported to produce a greater annual value in agricultural products than any other county in the United States.

This combination of soil and climate has, in my opinion, one very important aspect for the San Fernando Valley. If the current depression has taught us anything it has taught us that industry has gotten too far away from the soil. The great cities of the East which sprang up around a coal supply or a waterfall or a natural harbor created the congesting of workers into tenement districts rendering their lives so specialized that at no point did they come into contact with their actual food supply.

The back-to-the-land movement which I have advocated for many years and which is now receiving so much consideration in Washington and throughout the country is evidence of the new trend. Industry is moving into the

country. With the long distance transmission of electricity and existing efficient transportation systems there is no longer the need which formerly existed to concentrate industry into certain specialized areas. With the distribution of industry throughout rural areas the balance between agriculture and industry can be restored. The ideal which we are seeking is to give a man an opportunity to contribute his bit to society as a whole by working in the factory sufficient hours each week to produce all the things desired. The balance of his time can be devoted to healthful activity on a plot of ground surrounding his home which will be at the same time his garden and a source of fresh food for the daily needs of his family. Nowhere in the world, in my opinion, can this new ideal be so successfully established and operated as in the San Fernando Valley. Within the next few years with the first sign of normal functioning of the economic machine people will begin to come to Southern California in ever-increasing numbers. With the advantages of the San Fernando Valley as I see them and have indicated them to you, we will certainly get our share.

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INTRODUCTION OF COLONEL WAITE

AT BILTMORE LUNCHEON

February 24, 1934

Mr. Chairman and men:

California put on her best show last night in welcoming our distinguished guest from Washington, Colonel Waite. We christened him with a rain - the second one within a year - and saluted him with thunder and lightening which is unusual indeed in this country of most unusual things.

The Colonel's airplane was stormed down last night at Bakersfield. After watching the sky for several hours at the United Airport last night, a bus drove up to the landing and shoved the Colonel and his assistants and baggage out in the rain instead of delivering him to his hotel. We admired the vigor with which the Colonel responded to the salute of the elements and the treatment he had received. Here in the West we say that when a man ceases to cuss and starts to weep that he is getting old, and the Colonel wasn't weeping.

Now that he is here with us and we have discovered how vigorous and vital he is in health and how typically western he is in disposition, we know that although he has the most difficult job in America that we are going to get action and get it now.

I am honored and happy to have the privilege of presenting to you at this time Colonel Henry M. Waite, Deputy Administrator of the Federal Emergency Administration of Public Works.

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LOS ANGELES ADVERTISING CLUB

Biltmore Hotel

May 15, 1934

Those pictures you just saw resurrected from our historical files, have dusted off some memories which I have been too busy to think of for a long time. They are not very old in years, but are old in events. Since the days of the Bond Campaign when they were being shown to hundreds of thousands of people throughout the District, much water has passed under the bridge. Probably I should say much sunshine has fallen on the desert, because here in the west it is a novelty for water to flow under bridges.

It is now just about three years since those pictures were taken and shown. Since then the $220,000,000 of bonds were voted by the people of our cities a majority of almost five to one. Legal red tape and delays of a most annoying and unnecessary sort were cleared out of the way. Final surveys, plans, estimates, and all the tremendous details of the engineering plans involved in a project of this kind and magnitude were finished and checked and rechecked. Materials from our industries, and directly and indirectly from all corners of the Nation, began pouring in. Contractors and their men formed a continuous line onto the job. With roads, power lines, telephone lines, and the water system out of the way the aqueduct itself was started. That brings us up to today.

At this moment work is going forward on the entire ninety-one miles of tunnel on the main aqueduct. Four thousand men are working with efficiency and enthusiasm, breaking records every day and, most important of all, they and their families are eating regularly and are passing honestly earned money expended for sound and wealth-creating purposes into the arteries of our local economic system.

California people are lucky in more ways than one. With the exception of water we have all the advantages land and climate that go to make life a pleasure. But more than that, we have the kind of luck that fools boast about. We have, it seems to me, more of this fool's kind of luck than we have any right to claim or reason to expect. In running my mind over the experiences gained during thirty years of active interest in one way or another with the water problems of this area, I can cite you several instances that illustrates what I mean. We have played loose and free with the desert and, except for occasional lickings, have come through and managed to keep going. That the Owens Valley Aqueduct got here

not a moment too soom to take care of the growth since that time is so commonly known that we take it for granted. A delay of a few years might have denied us the growth and wealth we now have and would probably have ruined what then existed.

Speaking of fool's luc in getting water at the last critical moment, let me remind you of the well-known situation which developed in the case of our sister metropolis at the north. When the aqueduct of the East Bay Municipal Utilities District was completed, that organization announced that only thirty days' supply remained on hand. In spite of the fact that the project was completed far in advance of the time expected, their secretary reported that it saved the East Bay cities from a ruinous water shortage at a time when less than a month's supply was available. And that isn't all. Take the case of San Francisco. For a great many years they have been working on the Hetch Hetchy development to bring a water supply from the Sierras into San Francisco. Engineering and other difficulties had protracted the time of completion. In the fall of 1930 San Francisco was faced with the grim fact of a very serious water shortage. Because of several dry years in succession, the water storage in January 1931 was only sufficient for less than 90 days. The absolute necessity of obtaining an additional supply at once caused them to enter into negotiations with the East Bay Municipal Utilities District whose line had just been completed under the circumstances I mentioned before. Within the space of a few months, all of the negotiations were completed, plans made, and a connection from twelve to thirteen miles made between the two systems. The spring of 1931, you will recall, was very dry, and had not the East Bay Municipal Utilities District completed its program ahead of schedule, and had not San Francisco had the foresight and the ability to construct the connection, that city would have suffered a water shortage of the gravest kind. If there is not an element of what might be called fool's luck in beating out the demon drought by such a narrow margin, I miss my guess.

To bring the matter close to home, I feel that we are at the present moment in building the Colorado River Aqueduct, engaged in the same kind of a race where our fool's luck seems to be holding out just about nip and tuck. I am just as confident that we are not going to get Colorado River water one moment too son as when I made the picture you saw earlier in the meeting.

In closing, let me say that to many of you listening to me in this room today, the Board of Directors of the

District and the citizens of the communities composing it owe their appreciation for the loyal and fine support you have given to this undertaking. I want to say that if anybody in this world can finish this job in time and at the lowest possible cost to the taxpayers, it is our General Manager and Chief Engineer, Mr. F. E. Weymouth, and the competent staff he has gathered about him.

* * * * *

DEDICATION OF MORRIS DAM

May 26, 1934

It is my privilege and pleasure today to bring greetings and congratulations from the Board of Directors of the Metropolitan Water District to the citizens of Pasadena, and to the men who have built this magnificent dam.

This structure on which we stand is tryly another monument to the vision and foresight which have made Southern California great.

Located as we are in the heart of a semi-arid region, it has been such construction projects as this one here which made made it possible for us to win our battle with the ever-encroaching desert.

It has been a battle which has been fought since the first settlers came across the plains in their covered wagons to found a new empire here on the slopes of the Pacific.

California people are lucky in more ways than one. With the exception of water we have all the advantages of land and climate that go to make life a pleasure.

I say, "with the exception of water," and we are standing today upon vivid proof that the citizens of Pasadena clearly realize the paramount importance of that exception and have taken steps to make up the deficiency.

When I speak of water and water projects in California, I am reminded of the graphic lessons which have been taught us by the past - the tree stumps which can be seen beneath the waters of Lake Elsinore; the old wagon trail across the bottom of Goose Lake, and the Stone Indian huts which lie beneath the waters of Mono Lake. All these bespeak the great droughts which have come to California in the years gone by, drying up the waters of these lakes with such apparent permanency that Man and Nature assumed that the change was permanent.

Those are the lessons which we of California can read in the pages of time - and we have read them well, as is proved by the rection of such a mighty structure as this.

We of The Metropolitan Water District have a particular interest in this dam because it will, a few years

hence, become a part of the great Colorado River Aqueduct system. After serving the citizens of Pasadena alone, it will be placed in the service of Pasadena and all her sister cities of The Metropolitan Water District.

And so today I offer congratulations to Pasadena and to her engineer, Samuel B. Morris, on a good job, well done.

* * * * *

Before the

PURCHASING AGENTS' ASSOCIATION
at the
JONATHAN CLUB
January 10, 1935

Mr. Chairman and Gentlemen:

My natural inclination is to avoid public meetings, especially those which occur in the evening, and ordinarily I don't relish making public addresses. However, in this case, I can sincerely say that I welcome the opportunity to address a group as responsible and important as the Purchasing Agents' Association. I do not doubt but what the members present are responsible for purchases amounting to millions of dollars each month. The success of the business concerns which you represent depends largely upon your resourcefulness and skill in making purchases at the lowest prices.

It is natural that you should be interested in The Metropolitan Water District of Southern California, representing as it does probably the largest purchaser of its kind in Southern California today. The estimated cost of the materials and equipment which the District will require is $77,260,000. While not all of this will be purchased directly by the District, most of it will be because of the District's policy of purchasing the more important materials used by its contractors. In a certain sense the efficiency and economy with which this project is completed for the people of Southern California depends upon the ingenuity, skill, ability, and honesty of the Purchasing Department.

We are rather like the young lady who lost her check book and reported it to the bank, saying that it was perfectly all right, no one who found it could use it because she had signed all her checks.

During the past year or so the problem of purchasing has as you all are no doubt thoroughly conscious, been complicated by a number of factors, the least of which is not the conditions developed under the National Industrial Relief Administration. The Board of Directors of the District have been unalterably opposed to the principle of uniform bids. Some time ago we set up a special committee to investigate the situatiin and devise means of assuring honest competative bidding on all of the District's requirements. That one compressor should cost the same price as another totally different in design and weight by two thousand pounds is clearly ridiculous. There may conceivably be some items which are so standardized or uniform as to represent identical cost of production and possibly exceptions should be

made. But in general we look to our Purchasing Agent to find ways and means of obtaining proposals on a basis which will insure the most efficient and most favorably located concerns obtaining the business if they are satisfied with a reasonable margin of fair profit. It has been the policy of the District to give every advantage to local concerns, particularly those maintaining establishments within the cities of the District.

The ox that is being gored today is the taxpayer. We have never accepted the principle of favoring any concerns at the expense of the ultimate cost of the project. However, we do stretch to the limit every fair advantage in favor of the local producer who has the initial advantages of shorter hauls and familiarity with southwestern conditions.

The Board of Directors of the District have every confidence that its purchases have been made on a very reasonable basis, particularly considering the confusion which has pervaded industry. On the other hand, we have had the very decided advantages of the low prices prevailing at the present time and the tremendous desire of the manufacturer to expand their curtailed production.

We are always open and willing to receive suggestions which may help us in obtaining the prices to which we feel we are entitled. You men with tremendous knowledge and resources at your command should regard it as a civic responsibility to assist us in every way that you possibly can.

* * * * *

THE COLORADO RIVER AQUEDUCT AND ITS RELATION TO AGRICULTURAL DEVELOPMENT IN SOUTHERN CALIFORNIA

February 26, 1935

Agriculture in Southern California, or in fact any other occupation, including that of just living, is intimately identified with the question of water supply. The reason is made quite obvious by a simple comparison of our rainfall with that of any similar metropolitan area in the United States. The yearly rainfall in New York is 45 inches, Chicago, 33, St. Louis 37, New Orleans 57, as compared with 15 in Los Angeles, or from one-half to one-fourth as much. In addition the distribution of rainfall throughout the year in any one of the places named is, generally speaking, fairly uniform. That is to say, that a replenishment of the water supply might be expected during any month of the year. This means continuously flowing rivers, recharged underground basins, and simplifying problems of water storage.

In contrast, the rainfall in Southern California occurs in a short winter season, the balance of the year being practically rainless. Therefore, the situation that confronts Southern California is the water crop represented by only 15 inches of rainfall which must be conserved and distributed for the benefit of plant life and domestic, industrial, and commercial uses through a long, dry, warm summer season. Fortunately the geographical and geological conformation of Southern California is such as to lend itself to a maximum of water conservation. The long dry summer renders the storage of water in surface reservoirs wasteful, difficult and expensive. An evaporation loss of from five to six feet a year make it impossible to carry over surface storage for successions of five or six dry years.

Added to this, because of the steepness of the mountain slopes, is the generally complete lack of satisfactory and economical reservoir sites of considerable storage capacity. The geological fact which has been of inestimable value to Southern California is the existence of large subterranean depressions filled with materials having large interstitial capacity. There are about 29 well-defined individual basins of the type described. They vary from smaller ones along the higher foothill regions to those of great size closer to the coast.

The relationship between the growth of Southern California and the question of water supply can be indicated very forcibly by summarizing the successive stages since the Spanish conquest. The Spaniards found on their advent in Southern California a virgin country of knee-deep grasses, of

oak-studded slopes watered by occasional springs and perenial small streams. Conditions and circumstances dictated a grazing type of economy. With amazing rapidity the small herds of the Spaniards soon multiplied into the hundreds of thousands. The limitation upon the number of cattle was not so much the amount of forage as the amount of water supply and the forage that was available during the cycles of low rainfall. The early records of this area recount at intervals the terrible suffering of the live stock because of lack of rainfall. Upon several occasions the useless wild horses and undesirable cattle were culled out, driven over the cliffs into the ocean at Santa Monica to conserve the water and feed for selected animals.

Another expedient was the driving of the unwanted animals through the passes into the desert. The great drought of 1862 and 1863 sounded the death knell of the grazing industry.

Beginning about this time the type of economy changed from one of grazing to dry farming characterized by the great grain ranches of the San Fernando Valley and of the coastal plain. These flourished except for periodical losses of crop through deficiency of rainfall until about the 1880's when fruit growing with scientific irrigation began its development. The invention of impoved types of pumping equipment for extracting water from wells made this possible. It was then that the great underground stores of water, accumulated throughout the ages, began to be tapped.

The increase in pumping continued rapidly until about the beginning of the present century when a new phase was entered. About 1900, because of a series of years of deficient rainfall, it was discovered that the Los Angeles River drainage area wouldn't furnish a sufficient water supply for the domestic use of the population of Los Angeles City. This was in spite of the fact that the water shed was extraordinarily large and could be utilized almost to the last drop by well-located pumping plants. This condition brought to the fore a very acute problem, namely, the conflicting interest in an inadequate water supply as between municipal and agricultural uses. The leaders in Los Angeles realized that any further growth of the community on the existing water supply would be at the expense of, and to the detriment of, the agricultural development upon which the City was mainly dependent.

The solution to the problem was the well conceived and superbly executed Los Angeles Aqueduct to the Owens

Valley. When the aqueduct was completed the most optimistic observers believed the water supply problems of Southern California had been solved indefinitely. In fact, no less an authority than William Mulholland himself made the statement to the effect that the water problems of Southern California were solved until about 1975.

The situation which existed at the time the aqueduct was completed was that ground water levels had fallen generally, that the large areas of high pressure artesian flow had been contracting and great concern was manifested throughout the area as to the future of highly successful and profitable agricultural development. With the advent of the Owens River water the agricultural interests felt less concern over the prospect of a disastrous conflict with municipalities whose type of water use was of a higher order.

The growth in Southern California which followed the completion of the Los Angeles Aqueduct was phenominal, unprecedented, and entirely unanticipated in extent. The growth of industry predicated upon the efficient distribution of hydro-electric power was an important factor. In the early 20's it was obvious that the available water supply had again been exceeded. 1923 and 1924 were critically dry years and forced the realization upon the civic leaders of the necessity of a further augmented water supply. Engineering studies pointed to the Colorado River as the only adequate solution. In that year, following suggestions from many officials, the Boulder Dam Association of Southern California, the organization which was promoting the passage of enabling legislation by Congress, invited representatives of all the communities in Southern California interested in' the water problem to a meeting at Pasadena. Thirty-seven communities were represented at this meeting which resulted in the formation of an organization called the Colorado River Aqueduct Association. A committee was then named broadly representative of all the communities for the purpose of drafting base legislation which would permit and make practical joint financing and operation of an aqueduct to the Colorado River. After some disappointments, satisfactory legislation was obtained and there logically followed the organization legally known as The Metropolitan Water District of Southern California.

Under the enabling legislation the District was organized in1928 and in 1931 bonds were voted which made it possible to start work on the construction of the aqueduct. The aqueduct project is now well under way. In excess of sixty miles of the ninety-one miles of mainline tunnel have been driven. The quantity of water which the aqueduct will ultimately convey to Southern California is 1500 second feet, or roughly doubling the supply now available.

Among the results to be achieved by the aqueduct are the following: (a) stabilization and protection of existing agricultural and industrial development; (b) provision for continued growth of Southern California in accordance with its natural advantages and population-drawing power; and (c) the extension of a semi-rural type of development.

Engineering studies are conclusive in their demonstration that existing development in Southern California is highly precarious and insecure and the occurrence of a dry cycle which will bring catastrophe to agriculture and industry as now established is but a matter of time. Mr. Harold Conkling in a recent report shows that throughout California the level of underground water has fallen continuously since 1916. It would have done so even if there had been no increase in draft on the underground basin. However, he reports that pump installations increased from 1909 to 1929 from 665% in some areas to 118% in others. The average drop in the wells of the coastal basin between 1916 and 1933 has varied from fifteen feet to 245 feet with a general average for the entire area of 89 feet.

The Division of Irrigation of the Bureau of Agricultural Engineering recently reported the water level in fifteen representative wells scattered throughout Southern California from Pomona to Redlands and throughout Orange County had dropped on the average of 18.6 feet per well, or an average yearly drop of about five feet.

The coming of the Colorado River water and the extension of the membership of The Metropolitan Water District will relieve these conditions. It will also make possible the extension of the development now taking place throughout the United States of a combined rural and industrial development. With an abundance of hydro-electric power efficiently and economically distributed, and with the improvement of transportation facilities there is taking place a decentralization of industry. Industry is moving and will continue to move out into what is now the rural areas. This will result in an extension of the suburban development which has characterized our metropolitan areas in the last several decades. Conceivably there will be a conversion of now primarily agricultural areas into a distribution of industrial nuclei surrounded by small suburban units in which the workers will live. These units will consist of an acre or so of ground in which the worker will devote his time to the healthful occupation of producing a large part of his home food requirements. The reduction in the hours of labor and the days of

work per week will provide the workers with more time to devote to pursuits of their own inclination. Conceivably, the ultimate development of Southern California, which, with its long growing season and the great variety of small crops which can be grown throughout the year is admirably adapted to the type of development described, will be one continuous area of garden homes.

While the Colorado River Aqueduct is primarily conceived of as an undertaking to supply water for domestic, industrial, and municipal purposes, the type of development I have outlined will be a natural and inevitable solution.

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METROPOLITAN WATER DISTRICT DAY
at the
CALIFORNIA PACIFIC INTERNATIONAL EXPOSITION IN SAN DIEGO

June 22, 1935

"President Belcher of America's Exposition, Directors and Members of the Staff of The Metropolitan Water District of Southern California, and Friends:

We feel that this day is another milestone in the march of progress toward better understanding and bigger and better achievement. We, the Directors of The Metropolitan Water District of Southern California, can fully appreciate, Mr. Chairman, what you and your Board has had to contend with in making possible this sweet and delightful opportunity for the people of the United States and sister countries to come here and enjoy rare beauties of California and San Diego. Here, between towering mountains and your matchless harbor, you possess a year-round climate unsurpassed anywhere in the world. Surrounded by your fertile valleys, reaching down to the shoreline of the Pacific, you have combined the best there is to be found in ocean, valley and mountains. You are truly a City of Destiny, where the history of California began. I have just returned from a trip through the South, East and Middlewest where I have contacted people in various walks of life. I found them land-minded, water-minded and California-minded as never before. As we contacted and talked to these people throughout the country, we realized and appreciated the importance of Fairs like this to attract people from all over the nation.

The improvement in our transcontinental highways, the light speedy automobiles now on the market, the air-cooled, streamlined trains that rush us in comfort from coast to coast - a pleasant night's journey by sleeper plane from the East to California, a recreational voyage through the Paname Canal, the information sent abroad through the motion pictures and the stories told by newspapers, radio and manifold publications -- all these force us to believe we are on the eve of a tidal wave of immigration to California far surpassing in numbers any of those in the past.

We have here in California of the South all those living conditions which the human family has looked for through the years.

The only limiting factor is WATER. And that will soon be made available by the water now being stored behind the Boulder Canyon Dam to be distributed through the Aqueduct and canals, now being rushed to completion by the

Metropolitan Water District of Southern California, the Imperial and Coachella Valleys, The Mono Tunnels by the Department of Water and Power of Los Angeles.

I wish to take this occasion on behalf of the Board of Directors of the Metropolitan Water District to commend all those who have cooperated in making this Water Palace possible. I especially want to commend Don Kinsey who has represented the District in this matter.

For the benefit of members of our staff I see present, I wish to relate an occurrence which took place in the office of Chairman Jones of the Reconstruction Finance Corporation in Washington, so that they may know that their most efficient and capable activities are known and understood in Washington and throughout the nation. Our General Manager and Chief Engineer, Mr. Weymouth and I called on Chairman Jones just before my departure for the West. I stated that I had dropped in to convey to the R. F. C. the deep appreciation of our Directors for the very thorough manner in which the merits of the Colorado River Aqueduct had been investigated by the diligent and competent engineers and experts sent out by them to go over our project. Chairman Jones turned on me with those penetrating steel gray eyes of his and said, "You saw the report?" I replied, "Mr. Chairman, I did not see the report. But I know how capable and efficient is the organization of Frank E. Weymouth under whose direction this masterpiece of engineering is being carried forward. Never was there a greater genius in ability and organization than our General Manager and Chief Engineer. It's as clean as a hound's tooth. If, out of the six or seven thousand men now working for the District, there is one man employed on any other basis than, First, we had an honest-to-God job for a He-man, and Next, that he was impartially selected from an application list of over 80,000, then I don't know it. If there has been a contract awarded or a bill of goods purchased on any other basis than the lowest, best bid, then I don't know it.

In Frank E. Weymouth, we have an executive who has the backbone, the sterling integrity of character and the intestinal stamina, backed up by a Board of Directors which insures the completion of this great project on this high plane of civic righteousness. The result is up to the present time, all units are up to schedule and under the estimated cost except one."

Mr. Jones replied, "Mr. Whitsett, you can feel mighty proud of the report rendered by my engineers who investigated your project."

You already know that our conferences in Washington resulted in the securing of an additional $36,000,000, which will carry this work vigorously forward well into 1936.

The one unit to which I referred, the San Jacinto Tunnel, has recently been taken over by our own force account workers under the Weymouth organization. I have just returned from an inspection tour with Mr. Weymouth. The improvements t there are so marked that it is my opinion this unit will speedily be brought into step and the great Aqueduct will be completed, bringing the life-giving water of the Colorado to the thirteen cities of The Metropolitan Water District on schedule in 1938.

This means to these thirteen cities in the District not only the reinforcing and making sound of their present growth and development; but making possible their continued growth and prosperity, through all the years to come.

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ANNUAL BANQUET OF THE
CONSTRUCTION INDUSTRIES COMMITTEE
LOS ANGELES CHAMBER OF COMMERCE
Biltmore Hotel - March 15, 1935

ANSWERS TO QUESTIONS

Question: Why go to the Colorado River for water when we already have too much in the San Jacinto Tunnel?

Mr. Chairman, we consider water like the air we breathe, forgetting that it must be provided in desert places. It is all things to all men, enought is a good sufficiency and too much is a 'pesteration.' To the unsuccessful contractor, the water in San Jacinto tunnel is an unsurmountable obstacle; to the resourceful, successful contractor it would be anticipated and provided for; to the District it is one of the many problems to be met and overcome; to the rancher with even a moderate sized ranch during the hot summer season, it would be insufficient; to the rancher in the vicinity of the San Jacinto tunnel, located on receding water tables with falling wells it is a means of liquidating an unprofitable investment; to the resourceful attorney and experienced cameraman, a close-up Niagra Falls. But to a capable, experienced judge not a means to delay a great project with far-flung social benefits. To those opposed to The Metropolitan Water District of Southern California, more than enought to meet our present and future needs.

Question: How much new business is in prospect for our contractors in Metropolitan Water District work this year?

What you fellows would do with any more business from The Metropolitan Water District is more than I can figure out. The way we have been handing you contracts for the last year, everyone in the room must have four or five. You fellows are spoiled. You have been given so many jobs that you are beginning to think contracts come in bunches like bananas.

I have to admit, however, that wehn we give you a job you know what to do with it. Just how many more you are going to get I can't say, but if you keep your pencils nice and sharp as you have been doing in some cases, you will probably get all and more than you deserve. We are figuring on spending $52,600,000 in the year beginning July first, and that's a lot of money even after reading the daily newspaper reports of the debates in Congress.

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Before the

PRESENT DAY CLUB OF
RIVERSIDE

October 28, 1935

Mr. Chairman and Friends;

It is always a privilege to address a body of representative, progressive, civic-minded, forward-looking citizens in any community. The name of your organization appeals to me strongly. A Present Day Club, active and alive to the problems immediately before us, would be the solution to many of our difficulties. Too many are prone to look backwards, and, in dreaming of a past that is forever gone, miss the vivid opportunities of this swift moving drama in which we now live. The future of ourselves and our posterity depends on our actions in this very Present Day. In this connection, may I pay my personal tribute to Frank Miller, whose memory you are honoring tonight. He so lived with courage and vision each day that no words can measure the void he has left in the hearts and lives of those who knew him. Foremost citizen and builder of this community, he was also a world citizen in the truest sense of the word. His efforts toward world peace and international understanding have written his name deep into the pages of History; and his famous Mission Inn and that Cross on Mount Rubideau stand as beacon lights to guide storm-tossed travelers into this haven of restful beauty and peace which is your home. Frank Miller's works proclaim him to have been a man of unusual vision. His intense interest and approval of the Colorado River Water Development from its inception was an unfailing source of encouragement to those who led the fight. He saw the picture in its broadest ramifications. A man who accepted no limitations for the future of Southern California, he knew that no one ever achieved great things who went at them in a petty way. Here in the city of his heart, we shall ever feel the inspiration of his far-sighted leadership.

Another of your great and constructive citizens was a tremendous force in the inauguration of the Boulder Dam project. As I sat listening to the eloquent addresses made at the dedication of Boulder Dam a few weeks ago, I thought of Sam Evans. As I heard that mighty work proclaimed to be the world's greatest conservation project; the supreme engineering achievement of history and the vital factor in the future development of the entire Southwest, I thought of the time and effort Sam Evans had so unstintingly devoted to that cause without counting the personal cost to himself. Following in

the footsteps of such men, and inheriting the benefits of their work, it becomes our duty to "Carry On" with the same clear vision of the greatest ultimate good undimmed by personal prejudice and aloof from personal gain.

In this spirit, let us approach the subject which' has been assigned me for discussion - the Colorado River Water Development and its effects on Riverside County; past, present and future.

We must realize, first of all that the interests of all Southern California are so welded together that we will henceforth move more or less as a unit, whether we will or not. Before the world, Southern California is just ONE PLACE. From San Diego to Santa Barbara, and from Palm Springs to Santa Monica, our varied and numerous pleasure resorts and busy cities are woven together by a network of highways traversing our fertile valleys so that we are socially and economically one community.

The allurements that were here when you and I came to Southern California have been greatly augmented. To the natural attractions of climate and scenic beauty have been added the development of our great agricultural possibilities, the scientific development of our mineral and oil deposits with the resultant increase in population to build the magnificent homes and up-to-date cities that are our pride today. Without a doubt, the next decase will witness the greatest migration in the history of our Nation. The unfortunate shift in the wheel of fortune of millions of American families in the last few years, with the breaking up of homes and business ties that inevitably follow will cause those people who have a nest-egg left to seek new homes in new places where they may literally "start all over again."

Where will they go? A dozen basic reasons point to Southern California. Two things are necessary to get people into any community. First, have something real to offer them. Second, you must have an effective means of telling the world what you have.

The fame of Southern California with its friendly climate and fertile soil is known to every man, woman and child in America. The golden fruits that tempt the appetite from every corner fruitstand and fill most of the cans on the grocers' shelves over the entire country, proclaim a land of warmth and sunshine while three-fourths of the country shivers

amid ice and snow or breathes the stale air of artificially heated rooms. At every theater in America, and in thousands abroad, rapt audiences sit for hours each day watching intently the motion pictures that go out from Hollywood. The outdoor scenes invariably depict avenues of palms, flower bordered walks, stretches of foamy waves lapping on sunny beaches, mountain streams tumbling over rugged rocks or the weird, mysterious desert stretching out to challenge man's endeavor. Nowhere else in the world can all these varied scenes be found in such close proximity inviting the potential citizen to choose from ocean, desert, mountain or valley the one which pleases the mood of the day.

I believe from recent contacts made while traveling through the East, North, and South of this great country, that people are more California minded than ever before. The awful droughts that have laid waste thousands of acres in the middle west have also made the people more water-minded than ever before. A large percentage of our people are looking for "green pastures," and in the minds of thoughtful people, there are no pastures quite so green as those made possible here in Southern California by the building of the Boulder Canyond Dam, the Colorado River Aqueduct, and the All-American Canal. These are the wonder construction jobs of the ages now being crowded to completion. They are the answer modern science and skill is making to the age-old enemies of drought and flood.

The water stored behind Boulder Dam forms the largest artificial lake in the world, protecting the lower valleys from flood. The All-American Canal will take much of the Colorado River water to protect the winter gardens of America in the great Imperial Valley from drought and the Colorado River Aqueduct being constructed by The Metropolitan Water District of Southern California at a cost of $220,000,000 will secure the investments that have already been made on the coastal plains and insure the development of wealth and population that will surely follow the doubling of our present supply of water and hydro-electric power.

Do you question that these greatly increased facilities will be the means of a corresponding increase in population and wealth? I ask you to consider the improved transcontinental highways over which thousands of visitors come annually in their fast running, inexpensive new automobiles; the air-conditioned, streamlined trains that make an easy three-day journey from coast to coast; the airplane that takes us overnight from the Atlantic to the Pacific; the recreational voyages through the Panama Canal - all these new

means of transportation to bring people who are being given more leisure and are looking for the place they can find the most enjoyment at least expense. Southern California is the answer to their dreams. The one bugaboo which has hitherto frightened people who come from lands of abundant rainfall - the possibility of a water shortage has been put out of the picture once and for all with the availability of Colorado River water.

Industrialists pretty generally admit, that on account of our mild, invigorating climate, our cheap, abundant garden, orchard, dairy and poultry food supplies, our cheap hydro-electricity, that most things can be fabricated more cheaply here than elsewhere in the United States. Our markets of the future tie in with South America and the Far East, and the previously mentioned transportation systems make easily accessible the markets of the Eastern United States.

Theodore Roosevelt said over twenty-five years ago, "When the Atlantic era unfolded,the Mediterranian era started to decay and as the resources of the Atlantic seaboard are being exhausted we enter the Pacific Era which will be the greatest of the three." Increasing numbers of poeple of experience and means will be attracted here by the wealth-creating possibilities of abundant water and cheap power which have made possible our growth and development in the past.

The Pacific Era is here. Southern California as a whole beckons to a changing world which looks with unprecedented eagerness to new opportunities. You citizens of Riverside County will share with your neighbors the benefits that are ours in common. But naturally you are more especially interested in the direct benefits which your own locality is reaping from the Colorado River Water Development. So I have brought to you some actual figures on the amounts that The Metropolitan Water District has already spent in Riverside County and the amounts that will be expended before the Aqueduct is completed. In these days of unemployment, any community is favored which has a ready market for its products and a business being carried on in its midst which will add to the spending power of its peoples.

The amount spent by the District in Riverside County up to October first on supplies, service and utilities totals $2,733,210. The estimated amount to be spent before completion of the aqueduct is $8,010,000. In camps in Riverside

County to date $15,532,000; to December, 1938, $31,959,000. I have the itemized figures on the various expenditures which I submit for your more complete information, as follows:

FUNDS OF THE METROPOLITAN WATER DISTRICT
EXPENDED IN RIVERSIDE COUNTY

	Oct. 1,1935	Dec., 1938 (Estimated)
District purchases of materials and food supplies; rent and county taxes; personal, professional, and industrial services	$ 534,210	$1,070,000
Expenditures include:		
Taxes, rentals, easements, etc.	$ 62,745	
Gasoline, oils, auto supplies and services	119,648	
Meals and lodgings	77,739	
Personal and professional services, drugs and laboratory services	42,337	
Mess supplies	70,864	
Construction supplies and services	117,691	
Utility service (water, gas, etc) except construction power	43,186	
Expenditures by aqueduct contractors for above listed purposes	867,000	2,575,000
Purchase of cement from the Riverside Portland Cement Company	355,000	2,600,000
Purchase of electric energy from Southern Sierras Power Company	154,000	325,000
For construction of permanent surfaced highways, approximately 100 miles in Riverside County	403,000	440,000
For purchase of rights of way, power lines, telephone lines, water lines, roads, and aqueducts in Riverside County	420,000	1,000,000
Total	$2,733,210	$8,010,000
Expenditures for labor on aqueduct works with camps located in Riverside County	$15,532,000	$31,959,000

Of the total number of aqueduct employees working in Riverside County a large percentage are residing in Riverside

County with their families, and are spending all or most of their income in Riverside County. It is safe to say that at least $7,000,000 of aqueduct payroll money has found its way into the channels of trade in Riverside County thus far.

So much for the indirect and direct benefits which citizens of Riverside County will receive from the development of Colorado River Water as it affects you because of your location.

I have been asked to give you in terms comprehensive to the layman, the cost of water in the event your community would participate in the permanent benefits accruing' to the members of the Metropolitan District. At my request, our Hydrographic Engineer, Mr. C. C. Elder, has submitted two water cost assumption set-ups. First, on the delivery of 500,000 acre feet per year or half the aqueduct capacity; secon, on the delivery of one million acre feet, or full aqueduct capacity.

Now, in order to trasp the meanings of these figures, as they apply to the member-cities of the District, let us assume that the assessed valuation of Riverside would entitle you to 10,000 acre feet of water per year and that the aqueduct is operating at 500,000 acre feet per year or one-half its capacity, with Riverside using one-half of the water alloted you to augment or supplement your domestic supply, at the reasonable rate of $82 per acre foot or 18.8 per cubic foot. Assuming the raise in rates of water you are now furnishing for domestic purposes takes care of the delivery charge on this added supply, your domestic rate would then by only a fraction of a cent over the average of the 100 leading cities of the United States - or about 2 cents per hundred cubic ft. less than San Diego's present domestic rate and ten cents per hundred cubic feet less than San Francisco's. You would have no tax to pay and you would have left one-half your water, or 5,000 acre feet for other purposes without cost. Now you can take this assumption and divide the cost of being a member of the District any way you like between taxes and water rates, or different rates for different water uses. The cost is entirely a local matter; and it is strictly a local matter whether you ever apply for admission to the District or not. I simply want to say that, in my opinion, you will be most fortunate indeed if you apply for membership in The Metropolitan Water District and are admitted; for we are bringing in, even at full aqueduct capacity, insufficient water to protect

the present growth and investments, and to continue the development of the Southern Counties. In answer to the question so often asked, "What will happen if we do not get the water?" I will quote the reply given by that grand old water warrior, William Mulholland, when asked this same question when building the Owens Valley Aqueduct. "If you do not get it you will not need it." For the new settlers know and understand our water problems, and when they locate in Southern California, it will be in communities where there is an adequate, dependable, controlled water supply such as are provided by Colorado River and Owens Valley Aqueducts.

In closing, I invite you one and all to go out over the Aqueduct where eight thousand men are now working day and night. Watch the efficiency with which this work is being carried on under the direction of Frank E. Weymouth, our Chief Engineer and General Manager. Go to our offices in Los Angeles and get the answer to any questions that are in your mind about this project. I am not an engineer; but I do know and understand the gigantic difficulties they overcome and the varied problems they encounter. The only reason any man working on the Colorado River Aqueduct is there, is because he is a resident of the District and has been found to be the best available man to do an honest-to-God man's job. Our Board of Directors representing the thirteen member-cities, give freely of their time and energy without any compensation whatever; and every contract let, as well as every bill of material purchased, goes to the lowest bidder who can meet the specifications of our experts. We are proud of our organization and the manner it is building the Aqueduct - and still prouder that we are building for posterity security from the age-old enemy of every semi-arid region.

We appreciate your interest in our project and we invite any questions you may submit to our experts.

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A PLACE IN THE SUN FOR ALL

November 13, 1935

You California people don't realize what this winter sunshine means. Look at these weather reports - 'Middle West in Grip of Blizzard' - New England Thawing Out After Two Weeks of Sub-zero Temperature" - New York Traffic Slowed Down While Thousands of Extra Men Shovel Snow from the Streets."

Mr. Blank, a prominent official from Washington, with whom I had just completed an inspection trip along the Colorado River Aqueduct, dropped his newspaper on the lawn at his feet, stretched himself out confortably in his easy chair and surveyed the scene about. It was the middle of January and we were enjoying an afternoon of relaxation in the sunny gardens of the Desert Inn at Palm Springs.

Close by, a group of boys and girls in their gay sports togs were discussing the tennis tournament just ended, and over yonder two elderly men were returning from their daily round of golf. Ladies, in summer attire,sat about chatting, knitting, reading, or just lost in day dreams while music in the distance reminded us it was the hour of the tea dance on the open terrace.

But none of this could keep our gaze from wandering beyond this lovely oasis to contemplate the vastness of the desert that stretched before us from snow-capped San Jacinto to the little San Bernardino Mountains on the opposite side of the great valley. The ever-changing colors that seem to veil the sands - here in warm gold and rust and there in rich purples shaded to deep blues - make of the desert a mystic pageant that never presents the same picture twice. A few drifting clouds in the west promised a sunset of such vivid hues as can only be seen where sky, mountain and valley are blended with the shifting Sands of Time.

"How fortunate are those who can come to a resort like this while three-fourths of the country shivers amid ice and snow or breathes the air of artificially heated rooms," continued Mr. Blank.

It was under the inspiration of these surroundings and the enthusiasm of this newcomer to the Golden State that I visualized the future which must surely be realized for that strip of desert which stretches along the Colorado River Aqueduct. A limited amount of water to supply the needs of daily living is the difference between an oasis and the trackless desert that surrounds it. No land is so rich, nor yields such

bountiful returns from money and labor invested as the desert, as may be witnessed wherever adequate water is made available thereon. It may never be necessary to cultivate all the countless acres of desert lands. This greatest aqueduct in the world is being built primarily to meet the demands of the rapidly growing cities of the Metropolitan Water District of Southern California, who are its sponsors.

But there is a by-product of the aqueduct construction, the vision of which only a few have caught. And that is the creation of a winter resort for those many thousands who want and need the warm, dry winter sunshine of the desert, yet cannot afford the resorts designed for their more favored brothers. Think of the men and women of mature years who have a small income and would like to escape the rigors of a northern clime; think of the young parents whose delicate child demands winter sunshine to give it the proper start in life; consider the man of any age who has temporarily broken under the strain of office routine, yet cannot even think of the expensive sanitarium. The same sunshine, exhilerating atmosphere, and generally healthful environment which has made Palm Springs one of the world's most popular resorts can be made available to all with the opening of the aqueduct in 1938.

You ask how? Listen.

From Cojalco to Parker Dam, two hundred and forty-one miles of paved highway has been built following closely the line of conduits, open ditches and tunnels that will carry the waters of Boulder Dam to the Coastal Plains. Electric wires furnish light and power and telephone lines connect every mile traversed by this road with Los Angeles. What will prevent the one million people now living in auto trailers from making their winter quarters along this route once they know they can secure there the comforts of the modern auto camp along with the same climate that has made desert resorts the mecca for wealthy tourists? And what will be more ideal than colonies of modern cabins with garage attached where those who prefer to travel lightly at moderate cost can find confortable accomodations in this kingdom of the sun?

The American people are becoming daily more migratory. For years we have been literally "a nation on wheels" as faster and better automobiles have come within the reach of every family purse. Today, partly as a result of the depression's general breaking up of old ties, and partly as a development of the wanderlust born of this motor age, thousands are taking

the "Gypsy Trail." They are obeying the call of Nature, whose children they are, and seeking with each season the most favorable climate where they also can be near a source of food supply.

This is merely history repeating itself. For through the endless cycles of time, man has often become enmeshed in the complicated structure of civilization until, in rebellion against its artificialities he turns back to Nature, seeking once more the intimate contact he craves with the necessities of food, water, air and sunshine.

Man is essentially an animal. But he is a superior animal. He alone has canned, and pickled, and cured his foods and transported them thousands of miles from the place of origin. He alone has built his skyscrapers shutting out natural light and ventilation and supplying artificial light and air conditioning to suit his comfort. He glories in his conquest of Nature, yet he inevitably reverts to the simplicity in which his forebears were cradled. And, if he is wise, he takes to his simple retreat the best of the things a superior civilization has given him.

Americans are both wise and ingenious. So today, we see many of them turning nomads; condensing into an auto trailer all the conveniences of a small up-to-date American home and taking to the road in search of the most congenial climate he can find near the seasonal food supply. Manufacturers say they cannot keep up with the demand for these aptly called "Land Yachts", and each year witnesses more ingenuity in their construction until the housewife of the road often declares she would never again be "tied down" to keeping a big home.

To this rapidly increasing clan of nomadic people, this desert region of Southern California holds every lure. The winter gardens of America are located in the Imperial and Coachella Valleys only a few miles to the south.

Picture, if you will, colonies of these auto travellers located at intervals along the aqueduct, enlarging the engineers' camps which would form the nuclei for the first of these migratory settlements. The gaily painted land-yachts are flanked by awnings of contrasting hues to cover the dining table that has been set up in the open. Children play about on the sands; men and women lie about in the sun from which they are getting a healthy tan, and the housewife goest out to meet the truck that comes each morning ladened with fresh fruit, vegetables, milk and poultry products that were taken just a few hours before from the gardens of the fertile valleys of Southern California.

Only a few possibilities of the ideal auto-camp have yet been realized. Many have orderly arrangement for parking of trailers with convenient places for them to "plug in" on light and water at a small weekly charge. The variety of accommodations to be found in the many "cabins" located along the highways ranges from the crudest imaginable to apartments that compare favorably with a first class hote. The most popular are those that supply, clean comfortable beds, shower baths and cooking facilities at very moderate prices. Imagine driving up to a clean, simple, freshly-painted "cabin" and by inserting two fifty cent pieces in an automatic lock, opening the door. Inside is a really good bed, for which you would either furnish your own linen, or secure it by inserting another fifty cents into a wall cabinet. An electric meter is made to supply light and heat for cooking by the insertion of a quarter, and a dime meter turns on the water. Thus, for less than two dollars, a comfortable travel home is equipped for your use. Weekly and monthly rates are made for those who wish to stay for long periods, and with a minimum amount of personal service, a modern camp can be made to pay its owners well on their investment, while the public enjoys the most economical form of living.

The development of such camps along the Colorado River Aqueduct will not only open to Americans of moderate means this ideal winter resort; but it will mean greater wealth for the thousands of small garden farms that are increasing annually by the thousands over the fertile valleys of Southern California. The colonies thus established on the desert will send people into the cities to shop, attend theaters and patronize the restaurants. The cars, being detached from the trailers will carry half the family to the city for a day of pleasure while the other half remains "at home" to enjoy the out-of-doors for which they came.

The closer man keeps to Nature, the richer is his life. This fact is known to all who read and study the progress of man. Such famous health experts as Doctor Kellogg tell us that sunshine is the cure for most of the bodily ills that afflict men today. Certainly, the increasing popularity of out-door living is the reason for the extraordinary growth of all Southern California. These desert camps located along the Aqueduct will be but another added attraction for the Nature lover.

Thus will be made possible "a place in the sun" for all who seek health and recreation.

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ADDRESS FOR NATIONAL EMERGENCY COUNCIL
Monday, November 18, 1935
Biltmore Hotel

Mr.Chairman, Mr. Walker, and Friends:

We are here today to review briefly the many great civic projects that are being carried forward as the intelligent modern American answer to the challenge of this momentous transition period in the progress of our civilization.

I have the honor to speak for The Metropolitan Water District of Southern California which is building the Colorado River Aqueduct at a cost of $220,000,000. By the expenditure of this money, more than 200,000 persons throughout the Nation are being furnished with purchasing power over a period of six years, while the 2,500,000 people on the coastal plains of Southern California are being made secure in their homes and communities representing $7,000,000,000 of wealth.

The Boulder Canyon Project was made possible largely by our contract with the United States Government to take 36% of the firm hydro-electric power to be generated there.

The completion of the Colorado River Aqueduct in 1938 will mean that 1,400,000 acres of fertile, semi-arid, habitable land in this coastal area are protected for all time against the creeping paralysis of the encroaching desert.

"Without vision, the people perish." The citizens of The Metropolitan Water District of Southern California, representing one-half the population and one-third the taxable wealth of the entire State of California, realized that this area has tributary to it less than one per cent of the State's water resources. Seeing the compelling necessity of additional water supply to protect their homes and insure their future frowth, they voted, 5 to one, in September 1931, for bonds to guarantee the repayment of the money with interest which is being furnished by the Reconstruction Finance Corporation to carry on this project. These bonds constitute a first mortgage on the entire wealth of the 13 member-cities.

Consider these figures. Each month four million dollars are being paid into the trade channels of the Nation and this will increase rapidly during the coming year. 8,000 men are employed right now on the Aqueduct, and this number will be increased to 12,000 within the next six months. While this army of men is working directly on a necessary, constructive and wealth-creating job, they are using equipment and materials from practically every large industrial center in the Nation, requiring at the least estimate 30,000 additional men steadily employed to furnish said materials.

During the month of October, we used over 2500 carloads of material, equipment and supplies. Think of it - almost 100 cars per day.

We are using seven million barrels of cement - enough to build a 14 foot highway from Los Angeles to New York City - and 248,000 tons of steel requiring over 8,000 thirty-ton cars or 200 forty-car trains to transport it. Similar figures, staggering to the imagination, represent copper, aluminum, lumber, and other items too numerous to mention.

While plans for the Colorado River Aqueduct were started ten years ago, it seems providential that the actual construction of this greatest single piece of public work in the world, should be going on during these years when the national administration has as its first concern the humanitarian work of creating useful jobs to relieve unemployment.

We are building the Colorado River Aqueduct to last through the ages. It must las as long as civilization continues on this coastal plain, for it is bringing to us the foremost necessity of life which is water.

President Roosevelt, in the dedication ceremonies at Boulder City, stated: "This is an engineering victory of the first order - but it must be considered in its relationship to the agricultural and industrial development and its contribution to the health and comfort of the people who live in the Southwest." The same words may well be applied to this Colorado River Aqueduct.

When you watch the building of the Colorado River Aqueduct, you are watching the greatest factor in the building of a new Empire - an Empire to which millions of people now looking Westward will come to enjoy life, as it can only be enjoyed here in the sunkissed valleys of California.

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BEFORE THE ELECTRIC CLUB

December 9, 1935

Mr. Chairman, Members of the Electric Club, and Guests:

Many years ago, the completion of the Owens River Aqueduct met the necessities and demonstrated the possibilities of Los Angeles' immediate future growth. But a small, serious-minded, forward-looking, and "stepping" group looked further into the future. They, with that water warrior, William Mulholland, were convinced that the seating of an Empire in the Pacific Southwest depended upon an adequate, dependable, supplemental supply of water, buttressed and reinforced by cheap hydro-electric power for industrial purposes.

The final answer was the Boulder Canyon Dam and the Colorado River Aqueduct which makes possible the doubling of the present water and power resources of the coastal plains of Southern California.

The Colorado River Aqueduct is being built at a cost of $220,000,000. By the expenditure of this money, more than 200,000 persons are being furnished with purchasing power over a period of six years, while the 2,500,000 people on these coastal plains are being made secure in their homes and communities representing seven billions of wealth.

Construction at this time of the Boulder Canyon Project was made possible largely by The Metropolitan Water District contract with the United States Government to take 36% of the firm hydro-electric power to be generated there.

The completion of the Colorado River Aqueduct will mean the protection of our homes and investments, and make available water for growth and development of much of the 1,400,000 acres of fertile semi-arid, habitable land in this rich coastal area, this land having insufficient water.

Consider these figures. Each month, four million dollars are being paid into trade channels by The Metropolitan Water District of Southern California. Under the efficient organization of Frank E. Weymouth, our General Manager and Chief Engineer, 8,000 men are employed right now on the aqueduct, and this number will be increased to 12,000 within the next six months. While this army of men is working directly on a necessary constructive and wealth-creating job, they are using equipment and materials from practically every industry, requiring at the least estimate, 30,000 additional men steadily employed to furnish same.

We are now using approximately 100 carloads of supplies daily.

We will require seven million barrels of cement - enough to build a 14-foot highway from Los Angeles to New York City - and 248,000 tons of steel requiring over 8,000 thirty-ton cars, or 200 forty-car trains to transport it. Similar figures, staggering to the imagination, represent copper, aluminum, lumber, and other items too numerous to mention.

While plans for the Colorado River Aqueduct were started ten years ago, it seems providential for this community that the actual construction of this largest single piece of public works in the world should be going on during these years when useful, constructive employment is the challenge for the maintenance of our whole economic structure.

You gentlemen are interested in the development of Southern California. You know that industry follows population. And you know that population will only increase where water - a prime necessity of life - is amply assured. When you watch the building of the Colorado River Aqueduct, you are watching the greatest factor in the building of a new empire - an empire to which millions of people, now looking westward, will come to enjoy life as it can only be enjoyed here in the sun-kissed valleys of Southern California.

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Before the

SOUTHERN CALIFORNIA ECONOMIC COUNCIL
At Riverside, California - December 14, 1935

Mr. Chairman and Friends:

I have been asked to discuss with you some of the fundamental economic aspects of the Colorado River Aqueduct Project. Three years ago this month the work was started. It is scheduled for completion three years hence at the beginning of 1939.

At present eight thousand men are employed and during next year we will probably enter the period of maximum activity. Of ninety-two miles of tunnel on the main line, eighty-two have been excavated leaving only ten miles to be driven. Similar progress is being made on the other features of the work. Each month we are using in the neighborhood of 3,000 carloads of material, equipment, and supplies. I mention these quantities to give you a rough idea of the magnitude of the work and the progress being made. Expenditures for labor, materials and services are now averaging about $4,000,000 a month.

From an economic standpoint, the history of Southern California can best be told in terms of available water supply. On this basis, since the founding of Los Angeles in 1781, we can define three broad periods or changes in our economic structure.

The first period terminated with the great drought in 1862 that practically put an end to grazing which had been the prinicpal industry to that time.

The second period, in which dry farming was the primary activity, terminated in the 80's largely because the recurring droughts had made this business to uncertain and profitless.

The third period is characterized by the development of the citrus industry and the industrialization of Southern California. The beginning of our industrial progress can be definitely marked by the completion of the Owens Valley Aqueduct. Without that water supply, any measure of industrial growth such as we now observe would be an absolute impossibility. I could go into detail and give you statistical facts as to the different years of drought and their tragic consequences in the terms of loss of wealth and consequent human misery and economic uncertainty. Many of you

are fully familiar with this information; some of you from actual experience in the 80's and 90's.

Since 1900, or since Los Angeles was an overgrown village of a hundred thousand inhabitants, we have not had a drought approaching in severity a number preciding that time. Engineers have definitely marked two droughts of long duration in the past hundred and fifty years: one beginning in 1781 and lasting until 1809; the second beginning in 1842 and continuing until 1883, or forty-one years. During these periods there were, of course,wet years, but the majority were critically subnormal in rainfall.

Of even more striking significance to me is the record of the fluctuations of the level of Lake Elsinore. The record shows that at one time in the past century Lake Elsinore was reduced to practically a marsh and was many feet below its present level. Engineers are generally agreed that since 1916 we have been in what may be characterized as a moderately dry cycle, and yet Lake Elsinore in spite of diversions which did not exist a century ago, and which have further reduced the inflow into it, is comparatively much higher. I merely mention these factors as a background to a discussion of the economic aspects of the Aqueduct. It is important that you bear these considerations in mind as having a bearing on the future of Southern California.

With the coming of Colorado River water, Southern California will enter upon a new phase of growth and expansion. There are some who will argue that we have come to a turn in the road leading to a less promising future, of stagnation or at best of growth of only insignificant proportions. They proceed to build up elaborate arguments on this premise.

If we will thing back but a comparatively few years, we will find that there were in 1910 many who held the same opinions. Those who argued against the building of the Los Angeles Aqueduct contended that there would be no need for the water, that the city had approached the ultimate in its growth and that expansion would soon come to an end. Since that time Los Angeles County alone has grown to a point where its factories have turned out goods to an aggregate value of over one billion, three hundred million dollars a year. The population of Los Angeles City has grown to a million and a quarter, ranking the fifth largest city in the United States and the nineteenth in the world. The State is the second in the Union in the value of farming

products and the fourth in the production of mineral resources, and ranks third in per capita banking resources.

If we are to think of the future of Southern California in terms of the last few years, it is obvious that the true picture must be adversely distroted. However, those who have confidence in American institutions and the diversity and ingenuity which have made us the greatest Nation in the world must have an altogether different outlook. The depression years must be looked upon as a period of readjustment and consolidation resulting in the creation of a new basic and more sound level from which to advance. When the readjustments have been completed, and there is considerable evidence that they are being, the pent up energy of the American people will burst into activity with explosive force. Out of the realities which the depression has forced upon us will come a new conception as to a standard of living. The period of growth and expansion terminated with the settling up of the national domain will take a new course in the form of improvements in housing, in the production of more and more necessities, semi-necessities, and luxuries at continuing lower prices, and an expansion of purchasing power geared to the new standard of living.

These influences will undoubtedly mean more to Southern California than to any other part of the Nation. With increased mobility and with refinements of living, people will inevitably choose the advantages which we have to offer in terms of climate and the pleasures, comforts and conveniences which humankind has always sought.

Industry has turned to Southern California in earnest. The aviation industry, now in its infancy, will, in my opinion, become inevitably localized in California, just as the motion picture industry did some years previously. The manifold advantages which we have to offer will lead directly to growth of population, industry, and the expansion of agriculture, all of which must be provided with an increasing water supply not only to take care of the actual growth, but also to take care of the increased rate of consumption which has always characterized the advance of civilization and industry.

As in the case of the background and deficient natural water supplies which I mentioned previously, I bring out these factors as having an important bearing upon the consideration of the economic aspects of the Colorado River Aqueduct.

In considering the economics of the Colorado River Aqueduct Project, we must take a broad view. If we rough out the basic and fundamental outlines of the picture, the details can be filled in as time advances. Occasionally we are asked by skeptics and our critics to designate the particular place or places to which Colorado River water is going to be put to use. While technical minds haggle over these fine points, any conclusions at which they arrive are, in the last analysis, purely academic and may have no meaning in the light of experience. From the broad and fundamental aspects of the picture, it is sufficient for business minds at this stage of the program to know the general idea of consumption and the outside limits to the different factors involved.

I have already indicated the historical conditions which compel Southern California to protect itself to the utmost in assuring its water supplu, and the reasonable prospects of increased future demands on our water supply which must be met. There is still a further consideration, and that is the immediate water situation in Southern California. Engineers have demonstrated that our present consumptive use exceeds our average water supplu, including present importations. They have shown that this has been the case for a number of years, and that our underground water reserves, which constitute our primary supply, are constantly diminishing. The general situation fluctuates a little from year to year with the rainfall, but the long trend is towards complete exhaustion of our underground supply. Conditions also vary as between areas, some being at the moment reasonably well-assured as to their water supplies, and others being in a precarious and uncertain condition. On the basis of established fact, it would not be unreasonable to argue that the expenditure of the Colorado River Aqueduct is justified even though noe of its water is put to use for five or ten years. Two succeeding dry years such as we have experienced in the past could very easily do more damage to Southern California than is represented by the cost of this project. The loss of one year's agricultural produce, the destruction of an appreciable area of citrus development, the loss of industries by diversion to other areas more favorably situated with regard to water supply, besides the damage to our credit and the loss of confidence of the balance of the Nation in our security, could easily total a stupendous figure.

Aside from that, no civilized community can afford to gamble with human happiness and the stability of

accumulated wealth representing the labors of millions of people for many years. So, I say, it would be reasonable to contend that purely from the standpoint of securing our present growth, development, the homes of our people, and our prospects of continued expansion, the construction of this Aqueduct could be amply justified.

But those are matters of moral and philosophical discussion, and are not cold-blooded, unsympathetic considerations of economics. The Metropolitan Water District was started by eleven of the largest communities in Southern California which, in fact, were the underwriters of the project. Since its inception the project has been decreased by two cities and increased by four. The cities undertaking the project have not been in every case those most severly pressed for an adequate water supply. But they have taken the broader point of view that no city is complete in itself, nor can stand by itself, but is an integral part of the larger economic area of which it is a part.

Early in the project the representatives of the cities in the District defined the larger economic area for which the Aqueduct is designed. Roughly, this area comprises a territory lying between the mountains and the Pacific Ocean from the Ventura County line to the Southern Orange County line, extending eastward as far as the summit of the San Gorgonio Pass. This is the Coastal Plain of Southern California, every part of which is laced together by a multitude of mutually advantageous business activities. The part of the area not now included within the District must eventually and inevitably be a part of the District or go backwards. Whether they join this year or next year is of minor consequence. The fact remains that as certainly as day follows night the time will come when lack of rainfall and the encroaching desert will compel them to come to the Aqueduct for water. Anyone who would deny such a prediction is ignorant of the records of the past.

Within the area I have outlined, there are over a half a million acres of excellent land suitable for any kind of development, from agricultural and suburban home uses to highly intensified industrial concentration, not at present having a water supply. This area is approximately equal to that now under development. With the consolidation of the area outlined within the Metropolitan Water District, including these lands just mentioned, the territory will exhaust the demand which may safely be placed upon the Aqueduct.

Of course, until the area is completely developed, there will be a large margin of reserve, but any sound water development must always be from twenty to thirty years in advance of complete utilization. With this area consolidated as tributary to the Aqueduct, the project could be administered in the soundest manner for the utilization of both existing local supplies and the imported water.

The coastal plain area described represents what may be called the primary unit for which the Aqueduct was designed. I do not intend in any sense to convey the meaning that the project must necessarily be limited to this area. The final decision rests with the cities and the people comprising the boundaries designated. Beyond this primary area on the coastal plain is a larger area which may be designated as the secondary economic unit. This comprises the coastal region from Santa Barbara to San Diego, exclusive of the coastal plain, all of which is equally and probably much more greatly concerned with questions of water supply. Between Santa Barbara and Ventura on the north, and Orange County and San Diego City on the south, are two areas whose fertility and economic and social possibilities are not to be exceeded anywhere. If this entire secondary area were to become immediately tributary to the Aqueduct, there is no question but that its capacity would be inadequate for its ultimate development.

To what extent the Board of Directors of The Metropolitan Water District would encourage the growth of this larger area at the probably expense of the compact primary unit, is a matter for the future to decide. In a real sense it goes beyond the responsibility of the Board of Directors and is the concern of business leaders of Southern California such as are represented in this meeting. Even though the use of the Aqueduct water were conserved for the primary unit, it is conceivable that in periods of extreme drought such as will inevitably occur, it will be necessary for the Aqueduct in an emergency to assist and protect temporarily the areas to the north and south.

From the financial aspect the most important and difficult period of the aqueduct's operation will be the five or ten years immediately following its completion. At that time the sale of water will be at the minimum. On the other hand, the annual cost of the project will begin to increase. The amortization of the bonds will begin fifteen years from the date of their issue. Until amortization

begins, the annual cost will consist of interest and operation and maintenance expenses, including the cost of power contracted for with the Federal Government from the Boulder Canyon Project.

The sale of water by the District as now planned will be strictly on a wholesale basis to its members. This leaves the responsibility as to how the costs are to be met with the individual members, whether they be cities or large districts incorporated for membership. Consider for a moment the extreme possibilities which the individual members may choose in meeting their share of the cost. We may arbitrarily assume that, first of all, all of the expense is met by taxation, and second, from water revenue. Either of these two alternatives would undoubtedly represent an unfair distribution. To place the entire cost on taxes would be to penalize those owning vacant or highly improved property, or who are small consumers of water. To place the entire cost on water rates would be to penalize the large users of water and favor those owning vacant property whose values are increased by the surrounding growth and development which the water will make possible.

This problem is not the primary concern of the District, but of the civic and industrial leaders of the communities such as you gathered here. It is your problem and you should be prepared to help solve it at the proper time.

Let us consider one more phase of this question of the cost of water. Approximately at the same time the Aqueduct is completed, Southern California will receive from Boulder Dam through the municipal power systems and the large public utilities, the power from Boulder Dam. With the advent of this power and together with the Colorado River water, there will be presented to industry inducements to locate in Southern California such as have never existed before. The large volume of power at comparatively low rates will attract to Southern California large basic industries, such as electrolitic refining plants, which are also users of tremendous quantities of water. To induce these industries to come to Southern California, water must be available to them at prices which they can regard as attractive. It is entirely consistent with good business principles to make water available to large consumers at rates lower in proportion to consumption. Fortunately, we have a condition in Southern California which makes such a situation especially favorable. In spite of the fact that we are located in a desert environment,

with adequate sources of water hundreds of miles distant, Southern California has at present very low water rates when compared with practically all of the large industrial centers of the Nation, although these centers are located in most instances close to abundant water supplies and have climates furnishing them with rainfall throughout the calendar year.

If one-third the capacity of the Aqueduct can be sold at rates comparable with 180 of the largest cities in the United States, practically the entire annual cost, including amortization, can be met in the year of maximum annual expense. This is an exceedingly important situation of profound significance. It means that with approximately one-third of the Aqueduct put to use the remaining two-thirds of its capacity is available at the operating and maintenance cost of transmitting the additional water.

As an offset to selling one-third of the Aqueduct capacity at the average price being charged in the major cities throughout the United States, there could very reasonably be made a readjustment of rates as among the various classes of users in the cities, each paying in proportion to its ability and interest. By advancing the present domestic water rates for all local water supplies to the average of the 180 cities as mentioned, the additional revenue so obtained would make possible a material reduction in the price at which it would be necessary to sell the first one-third capacity of the Aqueduct in order to meet the District's maximum annual cost.

To quote figures for a specific comparison, the average rate at which water is being sold at present in the member cities of the District is approximately 12¢ per hundred cubic feet, or 750 gallons. The average rate in the 180 major cities of the United States is 18¢ per hundred cubic feet. This compares with the present rate in San Diego of 22¢ a hundred cubic feet, and in San Francisco of 28¢ per hundred cubic feet.

The question has been raised as to the circumstances under which the large existing potential demand for agricultural purposes could be met from the Aqueduct. This is a problem for which no final solution can be given at present, but one upon which careful and extensive studies are being made by a special committee of the District's Board of Directors and the staff.

Outside the District organization committees representing large and highly valuable citrus and municipal areas are also working on the problem from their local angle. At a meeting here in Riverside a few weeks ago, at a forum discussion, a suggestion was made from the floor which, in my opinion, had special merit. A gentleman proposed that water at present being diverted from local sources for domestic and industrial purposes be released to agriculture, and a supply substituted from the Aqueduct. This would turn over to agriculture within the District's limits water which is not now available to it, and which would probably meet a large percentage of existing deficiencies. Such a procedure would, in effect, represent a subsidizing of agriculture. From a strictly economic point of view this would be, in my opinion, an advantageous thing to do. By decreasing to the minimum water costs for agriculture, the cities would be building up the wealth, value, and annual profits of their back country and incidentally their own. From the standpoint of the city, anything along this line would be highly advantageous and would probably result in venefits equal to those accruing directly to farmers and growers.

In this same connection, and in closing, I will give you a hypothetical picture of our whole problem of water supply in Southern California as it might be viewed in its broadest and most fundamental economic aspect. Let us assume for a moment that one agency owned all the land of Southern California and also owned all of the water supply. How would that agency proceed to utilize the land and the water to the greatest ultimate good of the area? There are two factors to be considered. One is the price at which the water was sold, and the other is the wealth which would result from the use of the water. If the water costs were made high, the value of the land would decrease and the amount of wealth created would be less in proportion. On the other hand, if the water costs were made low, the utilization of the land would be increased, its production would increase, and the accumulated wealth expand likewise in proportion. The maximum annual return from the land and the maximum wealth created would probably be highest as the cost of the water to the user approached zero.

The wealth that has been created in the San Fernando Valley is a practical example of what I mean. The diversion of one hundred second feet of water into that valley has made possible the development of more than enough wealth to build the Colorado River Aqueduct.

The distribution of the Colorado River water at a reasonably low cost can logically and practically be made to produce sufficient taxing wealth to carry the annual costs of the project without increasing the average tax burden.

I have tried, Gentlemen, as I said in the beginning, to give you a picture of some of the economic relationships between the Aqueduct and the future of Southern California in its broadest and most fundamental aspects. The question of who shall participate in the benefits of Aqueduct water, and the manner of distributing the cost, are largely your problems. As business leaders it is to your communities' interest that you apply your sound experience and judgment to the solution of these problems in the most constructive manner for all concerned.

* * * * *

M E M O R A N D U M

January 3, 1936

You have asked me to account for the tremendous activity that is taking place in the San Fernando Valley today.

A number of homes located in fertile Garden Acres being constructed at the present time in San Fernando Valley probably exceeds that of any similar area in the United States. The reasons for this development are not hard to discover. To begin with, the lack of construction during the past five years of depression has resulted in an acute home shortage throughout the Nation. However, this does not in itself account for the rate at which building is proceeding in the San Fernando Valley. People are selecting San Fernando Valley as their homes for two fundamental reasons: they have become land conscious and water minded.

The depression years have compelled people to look more closely to the source of their food supply. Probably nowhere else in the United States can the food requirements of the families be more nearly met by home production. Every month of the year sees a diversity of crops under cultivation and harvest. Vegetables, fruits, berries, eggs, in quantity and variety, are available but for the effort of raising them.

However, without water this situation would be impossible. City streets do not yield these products to the city dweller. As never before people are willing and anxious to supplement their income by the produce of their own gardens. However, even the great fertility of the San Fernando Valley would mean nothing without an ample and dependable water supply. The great droughts and consequent suffering throughout the Middle West during the past few years have made the people water conscious as never before.

With the horrors of drought in their minds, people seeking the vibrant and enjoyable climate of Southern California have looked with apprehension on our water supplies. Not until they found that the San Fernando Valley has an ample and abundant water supply available at all times, delivered under pressure to their front gates through some 900 miles of large size water mains, have they made their investments in the San Fernando Valley. Movement has now started; it will continue with accelerating speed. Those that come will pass the story of the San Fernando Valley and its adequate water supply to those locally and in distant places who are seeking homes.

The water supply of the San Fernando Valley has, in addition to the supply coming from the Owens Valley, the waters of the Colorado River which will arrive through The Metropolitan Water District Aqueduct within a couple of years. This second water supply will make certain that the San Fernando Valley will have water even through the periods of drought which regularly strike our Sierra Madre Mountains.

The unique position which the San Fernando Valley will find itself in as a result of doubly insured water supply will make possible expanding growth limited only by the amount of land available.

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FIRST QUARTERLY DINNER MEETING OF THE

VAN NUYS CHAMBER OF COMMERCE

April 17, 1936

Mr. President, Distinguished Guests, Ladies and Gentlemen:

The Los Angeles Chamber of Commerce, in its last bulletin, announces that its annual banquet will be held on May 15th honoring the automotive and allied industries. Alfred P. Sloan, Jr., President of General Motors, will be the principal speaker and many other noted industrialists in related lines who have plants here will be present. The same bulletin tells us that Los Angeles today is the second largest productive center in these vital industries.

The name of both Mr. Sloan and Mr. Henry Ford should bear a special significance to us in the San Fernando Valley just now. For both of these leaders of thought and action have recently declared themselves strongly in favor of decentralization and a back-to-the-soil movement. Let me quote briefly from their statements in the Wall Street Journal of April 1st.

Henry Ford says, "The farm and the factory are natural allies. One is incomplete without the other. They never should be separated for each has the power to heal the other of any economic ills that may befall."

Mr. Sloan says, "I personally believe that decentralization is a good policy for industry to follow, rather than to follow the policy of a highly centralized integrated unit, which carries people that much farther from the soil. After all, the soil is a pretty good thing to stick to. We can learn a lot from it."

I say these statements bear special significance for the people of the San Fernando Valley because here we have that soil they seek, combined with the most ideal living and working conditions to be found in America.

The economic necessity of decentralization, so generally recognized today, will drive industry to places convenient to productive areas. We, of the San Fernando Valley, planned more wisely than we knew when we installed more than 900 miles of underground pressure water mains to assure a controlled water supply for these fertile lands.

Throughout the great Middle West, the North and the East, the cruelty of the elements in recent seasons is driving

those who can afford to choose their environment to more friendly climes. What place on earth holds the lure, or is so famed for its sunshine and flowers, as Southern California?

The years of depression have made thousands think of the security offered by the small home with its garden acre, where a man can supplement his earnings or income with the healthful occupation of tilling his Good Earth.

These tendencies give justification to the prediction of William May Garland, recognized authority on the growth of Los Angeles. Mr. Garland says we will have 2,000,000 people by 1940. That means over 150,000 a year increase in population.

Half of that number can be located in the San Fernando Valley if we will take advantage of the present national trend, "Back to the Soil", and point out the merits of living here on garden acres with a dependable, controlled supply of aqueduct water which this valley alone can offer with land to meet these requirements.

To get the merits of the San Fernando Valley intelligently before these newcomers should be a real challenge to the Van Nuys Chamber of Commerce.

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LAYING OF THE FIRST PIPE
for the
SANTA ANA RIVER SIPHON

June 15, 1936

Mr. Slater and Members of the Organization of the Western Pipe and Steel Company:

On behalf of the Board of Directors of The Metropolitan Water District, I want to express its appreciation for your courtesy and thoughtfulness in affording this opportunity to view your plant and the methods you propose to use in the construction of the Santa Ana River Siphon, the contract for which was awarded to you as the lowest bidder on January 10, 1936.

After reviewing your plant and personnel, my own reaction is that the District can look forward to a first-class job constructed in accordance with the best engineering practices and on schedule.

There is nothing I can say to those assembled here that would add anything to the information which they already have as to the character and responsibility of the company doing this job. From the point of view of the Directors, I can state that we have every confidence that you will turn over to us a job of which we may be proud.

I might add that it has been a great satisfaction to our Board to have been able to award large units of the Aqueduct construction to local concerns, strictly on the basis of the sound economics of competitive bidding, with the lowest responsible bidder obtaining the contract. Particularly is it true of work such as is involved in your contract where a large amount of fabrication is involved giving employment to great numbers of our local residents.

In the case of some of the larger construction contracts, the lowest bidders have not been local residents, although, of course, they have been required to utilize local labor almost exclusively. It is natural and to be expected that our local contractors should be the lowest bidders on much of the work. They have all the advantages of knowing the territory in which the work is done, of knowing the extent and character of the labor supply, of accessibility to the work, and of local conditions of manufacture which are probably in all aspects more favorable as to cost than in any other section of the country.

We congratulate you on having been the successful bidder on this contract and extend you our best wishes for a successful and satisfactory conclusion of your contract. You know thoroughly the kind of work which the District requires, and we are confident that the standards will be voluntarily accepted by you as your minimum.

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Neenah
SUCCESS BOND
RAG CONTENT
MADE IN U.S.A.

THE SOUTHERN CALIFORNIA ECONOMIC COUNCIL

June 20, 1936

Gentlemen:

I appreciate this opportunity to say a word about the progress being made by The Metropolitan Water District of Southern California. At your meeting last December I had the privilege of presenting an outline of the more important economic aspects of the project. At this time I intend only to emphasize and supplement some of the points which were presented to you on the previous occastion.

The construction of the Aqueduct is proceeding in a highly satisfactory manner, both as to the rate of progress and as to the cost. A solution of the tangible problems having to do with forces and materials is in good hands. It is the intangible economic and social problems which are at present receiving our greatest attention. As the project nears completion, we must make preparation for the sale of water.

To all concerned, it is a great satisfaction to know that in practically all sections of Southern California people are awake and earnestly studying their actual and potential relationship to the District. The high-value citrus district of Glendora and Pomona, the industrial coastal sections of Los Angeles, practically all parts of Orange County from the citrus belt to the recreational areas along the Coast, and in the entire territory lying to the south as far as and including San Diego City, have made inquiries concerning membership in the District.

It seems clear to me that the logical expanison of the District would be radially progressing from the Los Angeles Metropolitan area. The simplest solution that presents itself would be the annexation of all of Orange and Los Angeles Counties to the District as a unit. This would form a compact, consolidated area from which the District could expand as economic reasons dictated. This set-up is based upon the sound general principle that only those areas within the District will be permitted to purchase water.

It is obvious that if the District adopts the policy of selling water wherever the demand existed that an equable distribution of the cost of the project between water rates and taxes would soon become impossible. Furthermore, an indiscriminate distribution of the water without regard to the interests of the Metropolitan Area, which has made the project

possible, would eventually result in building up territory adversely to the interests of those who are paying the bills.

After Los Angeles and Orange Counties have been consolidated into the District, careful consideration should first be given to the water needs of those parts of Riverside and San Bernardino Counties lying this side of the mountain.

It would then seem sound to consider the feasibility of protecting present wealth and development of Ventura, Santa Barbara, and San Diego whose water supplies are now reported as being inadequate, if not critically insufficient. San Diego represents a unique situation. That city has its own filing in the Colorado River. To join the District would pool its water right; it would not reduce the water available to the primary District area.

On the basis of quality of the construction work which has already been done on the Aqueduct, engineers are predicting that the carrying capacity of the Aqueduct would be sufficient to take care of San Diego's addition. From some sources the policy is proposed that The Metropolitan Water District expand by the annexation of territory progressively outward from the Los Angeles Metropolitan Area to the extent that water is available, giving special consideration to sustaining communities and areas already highly developed.

In all of the areas now considering annexation, committees are engaged in economic study. The first concern, of couse, is water under any circumstances. Having not yet exhausted their diminishing reserves, they are naturally analyzing the problem from its economic aspects. They want to know what it is going to cost and the manner in which they can best protect their own interest. Some feel that their advantage lies in delaying annexation to the District as long as possible. The majority, I believe, appreciate the fact that great advantages exist in obtaining membership as soon as possible. When distribution lines have been built and water begins to flow within the District, they will realize that their opportunity to have a choice in the location of lines and in the policy of selling water has been materially reduced.

As a fundamental proposition, we can say that land in Southern California is valueless without a dependable water supply. In other words, it is the water which places the value upon the land and is the commodity which creates a real and lasting value. The question naturally arises as to what price can be paid for water to build up or maintain a

community development and the individual parcels comprising it One could say as an extreme case that one could afford to pay almost any price short of confiscation of his property in order to protect his water supply; however, it happens that the cost of the Aqueduct water on a sound economic basis can be made entirely reasonable and not in excess of the average paid by the Metropolitan centers throughout the United States.

I am speaking now of the early years of operation. The cost of the water will diminish with the quantity that is consumed. I have spoken as though all of the costs of the Aqueduct project would be met by the water user. This, of course, will in all probability not be the case. There must be an equable distribution of the charge for capital, maintenance, and operation as between the water user and the property owner whose values are made possible by the imported water.

These are matters over which the District is not primarily concerned. All of its consumers will be either communities or districts to whom the District will act in the capacity of a wholesaler. The distribution of the costs within the community or district is a problem to be solved to the best advantage and in accordance with the conditions existing in each particular case. The Board of Directors of the Metropolitan Water District is not in a position and doesn't want to dictate or prescribe the manner in which its constituent units choose to meet their share of the cost of the project; however, as a general policy we recommend lower rates for irrigation purposes since agriculture is basic in the wealth producing activities in all Southern California. It would be an unwise policy to overcharge or place an excessive burden upon the use of water for basic and agricultural purposes.

We must also not be unmindful of the great industrial development which is now taking place and the attraction which low water cost would obviously have for many types of industry. By "water costs" I mean the actual delivery price. This will not in all cases be the same as the actual water cost when the share borne by taxes is taken into consideration. There is a distribution of charges as between taxes and water rates which will be of vital concern to all of us.

In establishing this correct relationship, the best and most experienced business brains of the community must be

consulted. The final answer to the whole problem, of course, is the building up of the wealth of the population of our communities as rapidly as possible, thereby reducing the cost of water by increasing our tax base and reducing the unit cost of operation of the Aqueduct.

In all of our studies we must never lose sight of the very definite relationship in Southern California between the cost of water and the value of land. As the price of water goes up, the price of land on which the water is used is depressed, and conversely. From a community standpoint, and aside from the equable distribution of cost as between all the elements within its confines it makes little difference whether the cost of bringing Colorado River water to the Coastal Plain is paid be water revenue or by taxes. With low water rates we would accelerate the trend of values deriving an increasingly greater share of the cost from taxes upon assessed valuation. With increased water rates the effect would be to reduce land values and increase the proportion of the cost which would be derived from the sale and consumption of water.

As I said at the beginning, in these remarks I intended only to supplement and enlarge upon what I presented to your group last December. It has been my hope to provoke in you a sufficient interest in these problems so that you would undertake to make some substantial contribution to their solution which I know is inherently possible. It is your problem, probably more so than that of any other group in the community. I would like nothing more than to see you put your shoulders to this wheel and hasten assured and correct solution.

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LOS ANGELES CHAMBER OF COMMERCE

September 3, 1936

Gentlemen:

To me, the fundamental principles on which the District must base its plans of operation in the future are quite simple. I can see that the details involved in the working out of the problems are not easy, but the broad general lines along which the project must be developed in order to be fundamentally and economically sound are clear.

The project is now over the hump. All of the major construction problems are solved or their solution is sure. We know definitely the project can be built well within the money and on schedule. The construction activities have become in a sense routine and are largely behind us. We are now faced more than ever before with the comparatively more complex problems arising from the operation and distribution of the water.

Let me make clear the basic problems which now confront us. First of all, we are faced with the fact that the need for an assured water supply in Southern California is even greater than was envisioned at the time the project was started. The whole world has become water-conscious as a result of the two disastrous droughts which have occurred within the last three years. People realize that a stable economy cannot be built except on a basis of a controlled water supply that is independent of the annual fluctuations and distribution of rainfall. Southern California, because of its natural assets, including water and power, is becoming more and more an industrialized community. Forces now in action will cause increasingly greater decentralization of industry with the consequent increase in the number of large plants located here.

In addition to the water requirements for industries and the people accumulated in communities identified with their operation, we are faced with the problem of a supplementary water supply for agricultural purposes. Water conditions throughout our citrus areas are approaching a critical state. Without the assurance of the supply which the Colorado River Aqueduct will deliver, the future of Southern California agriculture would be one bordering on despair.

The foregoing is fundamental. We are going to need the water in all branches of our economic life, and there will be a market for Colorado River water when that becomes available.

As a first unit, the Aqueduct will be capable of delivering 750 second feet. Ultimately it will have a capacity of twice that amount. The question then immediately arises as to the areas upon which the water is to be placed to use in the first instance and ultimately. In this respect we might consider two possibilities. First, we could limit the areas tributary to the Colorado River Aqueduct to the immediate Coastal Plain of Southern California comprising the portions of Los Angeles, Orange, San Bernardino, and Riverside Counties lying this side of the mountain. The ultimate capacity of the Aqueduct will not provide more than enough water for the ultimate development of this territory. If the scope of the District were expanded to the north and south where the water shortage is as acute as in the local area, a great deal more water than the Aqueduct is capable of carrying would be eventually required. In the early years of operation in order to sell as much water as possible there may be a tendency on the part of some to enlarge the District to communities and lands not heretofore contemplated as within the scope of the project. Such a policy, unless it were tempered with great discrimination and foresight, might prove in future years to have been very unwise. Personally, I believe that the water supply to be furnished by the Aqueduct should be concentrated primarily to the intensive development of the local area. If the economically useable portions of Los Angeles and Orange Counties, together with possibly the corresponding portions of Riverside and San Bernardino Counties lying this side of the mountains are included within the District, great discrimination should be used in permitting water to escape to areas more remote.

The case of San Diego is possibly an exception. They have a water right in the Colorado River which is additional to the rights of The Metropolitan Water District and conceivably a sound arrangement could be worked out so as to enable that city and adjacent areas to obtain the water necessary to maintain their present growth and development. Also, I believe that under some circumstances we could not stand by and allow areas economically tributary to Southern California to suffer great disaster because of temporary shortage of water. The District, in my opinion, would be under some conditions warranted in making water available on a sound and equitable basis sufficient to maintain existing growth and development from Santa Barbara to San Diego.

The foregoing two fundamental facts, I believe, will be accepted by all. First, that there is a present need for water that will continue to increase rapidly in the years

to come; and, secondly, that great foresight must be exercised in combining within the District those areas which are economically a part of the Southern California Metropolitan Area and for which sufficient water for their ultimate development will be available.

The next question upon which an early decision may be important is the matter of the distribution of cost to cover the capital and operating charges of the project. This question will be magnified greatly in the first few years of operation. The District has accepted the sound policy of delivering no water to areas not having membership in the District. The areas which are in the District must bear the cost either in the form of taxation or payments in purchase of water received. How these charges are to be distributed is a question on which exists considerably difference of opinion. The more taxable wealth that is included in the District, the less will be the tax rate necessary to meet the fixed charges. It is a generally accepted principle, and I believe it is sound, that the major portion of the capital charges should be met by taxation. As to the sale of water, the District will only function as a wholesaler to its constituent members. The different users, such as domestic, industrial, commercial and agricultural, vary greatly as to the price they can afford to pay for water. They even vary greatly within each group as,for instance, the price which agriculture can afford to pay has been stated to vary from $6.00 to $30.00 or more per acre foot. If the price is made comparatively low to agriculture, a large volume of water will be sold, increasing the taxable value of land and building up a prosperous back country which makes urban life possible and business profitable.

The principle has been accepted generally by the Board of Directors in considering this subject of establishing a price for water which, during the early years of operation, will result in the District receiving a maximum gross revenue. This principle is based upon the fact that the minimum expense of keeping the Aqueduct in operation must be met and a fair price should be fixed which will put this water to use maintaining and creating new wealth in the District.

The price of water is, of course, closely related to the quantity which is put to use. If the District could know in a contractual sense how much water various areas will demand, it would be a rather simple matter to establish a

fair price. The problem summarizes into the fixing of a price for water which will yield a large gross revenue not too high to retard development nor too low to overly penalize the cities for the benefit of the agricultural areas and at the same time giving consideration to the possibility of eventually placing the project on a self-sustaining basis.

Another question which is under discussion at the present time is that of the treatment of Colorado River water. Admittedly, the water is hard compared with existing supplies in Southern California, and compared with the water being used in most of the large industrial centers. Soft water is desirable for municipal purposes but it is less desirable than untreated water for agricultural purposes. There are certain advantages in having the treatment of water performed by the District. On the other hand, inasmuch as the various component parts of the District have different ideas and different conceptions as to the character of water they desire, there is a logical argument for leaving the treatment of water to the individual cities and areas so that each can satisfy its respective requirements. Treatment of the water also involves some duplications of conduits because water for agriculture and municipal uses must be kept separate. Personally, I am inclined to the view that the acceptance of the responsibility for the treatment of water by the District should be deferred as long as possible and until all factors are definitely analyzed, including the amount of water which can be sold for municipal purposes as compared with the amount demanded for agriculture.

I am strongly in favor of the principle of reducing the initial construction cost to the absolute minimum. Any features which can logically be deferred, I believe should be dispensed with. Anything which, while desirable, is not absolutely necessary, should be put off, regardless of the amount of money which the District has at its disposal for construction purposes. I believe that by proceeding on this principle, a very large sum of money can be retained in the District's treasury at the time the project goes into operation. This fund could be utilized to the best interest of the communities in several ways.

One use which I believe is economically sound and proper would be the subsidizing or assisting in the construction of extensions to the distribution system. These extensions would be financed jointly by the District and potential

water users within its membership, the contribution of the District being somewhat proportional to the amount of revenue to be derived. If such use of the surplus funds of the District should prove unfeasible or undesirable, I would advocate the cancellation of the unexpended balance of the bond issue.

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PARKER BRIDGE DEDICATION AT PARKER, ARIZONA

September 25, 1937

Governor Stanford, Government Representatives, Distinguished Guests, and Citizens of the two Sister States of the Southwest:

The Board of Directors of The Metropolitan Water District of Southern California came here in person 100% to bring you greetings on this important occasion. Never have we been able to get so many of our directors to turn out on any of the important field matters along our Aqueduct. So, I wonder whether they came here to see this wonderful new bridge binding our two great States together or to pay their personal respects to Clara, the dynamic and persistent Secretary of the Northern Yuma County Chamber of Commerce, who is so largely responsible for this great achievement.

If it were possible to have the figures on the investments of Arzona people in California, and California people in Arizona, I am sure we would be surprised at how closely we are tied together and by the astounding amount involved.

About thirty years ago, I lived in Arizona. I purchased a ranch on Central Avenue across from Dwight B. Heard's. I bought it as an investment before the coming of your Aqueduct Water to Phoenix and the Salt River Valley. After the water arrived, the value doubled and I sold it.

I was in poor health when I came to Arizona seeking the climate Phoenix, through its Chamber of Commerce, advertises to have. The wonderful and invigorating climate of Arizona restored my health.

I also invested in several miles of Hassayampa River bottom land believing it contained placer gold, and I still believe it does and will some day prove a valuable dredging proposition. I can make this prediction without qualifications by saying that I have drunk from the Hassayampa River with my heels up-hill, which confers on me all the privileges of a Hassayamper.

Last year the citizens of California purchased $4,000,000 worth of Arizona cattle, and I do not know how many thousands of car and truck loads of fruit and vegetables, dairy and poultry products. This consumption of cattle should reach $10,000,000 or $15,000,000 per year as our population is increased by the additional water brought in by the Colorado

Aqueduct. The putting to the highest beneficial use of this small part of the water being stored back of Boulder Dam - water which formerly wasted into the Pacific during the flood season - will consequently redound tremendously to the economic interests of Arizona.

I always order Arizona grapefruit when I am not in Florida, and all the judges of quality in grapefruit do the same. To be sure, you fight with us, your best customer, over the division of Colorado River water, but that is so perfectly natural and so damned human, we understand, for men and animals have done that very thing all down through the ages at every water hole in desert places. I know two brothers in California who are always fighting over the division of water, and no one has ever heard of an Arizonan running from a fight.

We both have an advantage, however, in fighting over Colorado River water owing to the fact that there is water in the Colorado River to fight over. But if the learers in Arizona would join with the leaders in California, in directing their pugnacious instincts to seeing that unwise diversions were not made at the headwaters or that Mexico is not permitted to appropriate more than her just there would always be plenty of fresh water in the Colorado for the citizens of both States.

So here is hoping that this new bridge connecting with the 160 miles of highways constructed by The Metropolitan Water District of Southern California will be a new tie binding closer the citizens of these two great States as we go down the Highway of Destiny building together the great Empire of the Pacific Southwest.

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32ND ANNUAL STATE CONVENTION

CALIFORNIA REAL ESTATE ASSOCIATION

October 8, 1936

There is nothing constant in the world but CHANGE.

Changing political philosophies, changing religious beliefs, changing social relationships, changing cycles of weather and - above and through all - the changes being wrought as science advances to meet the challenge of natural barriers to human progress - these are the factors with which we of the twentieth century must reckon as we approach the solution of any important problem. We, in this group, assembled to consider the best ways and means of promoting the interests of California and of setting forth her manifold attractions as a place of business and residence as contrasted with other sections, realize that our whole set-up is dependent upon an imported supply of the one necessity of life in which this otherwise particularly blessed section is deficient. I refer to Aqueduct Water that has changed and will continue to change our fertile acres from barren desert into happy homes, prosperous farms, and busy cities.

The building of Boulder Dam has changed the geography of the Southwest.

As if conceived and rushed to completion by prophets who foresaw the need of the immediate duture, that greatest of human engineering achievements stands today as an answer to the bewildered crys of thousands of erstwhile farmers of the middlewest whose homes and fortunes have been dissipated by the SAME vagaries of rainfall which have disintegrated the population of ancient empires and scattered civilizations throughout the pages of history.

Yes, we are in a period of many changes, one of the most significant of which is the entering of a period of CONTROLLED WATER SUPPLY. This new application of scientific knowledge to the control of the basic necessity of all life - animal and vegetable - will lay deep the foundation of immediate future growth and development, permanently seating the Empire of the Pacific here on the coastal plain of Southern California.

There is nothing more true than that like produces like under similar conditions.

The prime factor in the growth of population in Southern California is its pleasant and healthful year-round

climate. Leaving its full description to poets and salesmen who know its charms and can describe it much better than I, we agree that our climate is the constant attraction around which we build. For in no other place can we find the varied scenery and climate offered by ocean, valley, mountain and desert in such close proximity as here - where within a few short miles over perfect highways, the restless human family can find whatever condition it craves most at the moment.

You are all familiar with what happened when the Owens River Aqueduct was built. Upon the anticipation of that sure water supply our population doubled between 1900 and 1910. Upon the realization of that added water supply our population doubled again between 1910 and 1920, and still again between 1920 and 1930.

It is a recognized fact that no matter how meritorious a place or a commodity may be, it must be properly advertised if the world is to know about it. Certainly, California enjoys to an exceptional degree every usual means of advertising - such as our great Chamber of Commerce, our All-Year Club, and our many outstanding newspapers and publications. But more than this, we enjoy UNUSUAL means of world-wide advertising possessed by no other community. I refer to the motion picture which through its many appeals to popular fancy focuses the eyes of the world on our Hollywood. And more than that, every fruit stand in America with its lure of Sunkist fruit and fresh, green vegetables proclaims throughout snowbound countires, a land of perpetual productivity, and the cans stacked high in every grocery store bear labels that invite attention to California.

Further still, we enjoy the advertising given by increasing thousands of visitors who come to us by the greatly augmented means of travel - airways, transcontinental highways, and air-cooled trains, as well as the delightful cruise down through the Panama Canal which makes us a neighbor to the Atlantic Coast.

Yes, California has exceptional attractions and the world knows about them. But what peculiar circumstances of the present era of change are working in our favor?

All great migrations of people are preceded by drastic conditions. The uprooting of home ties and the breaking up of business relations and the freezing up of available

funds with which to move about have marked the recent years of depression. The devestating droughts that have ruined thousands of acres in the middlewest have made people water-conscious as never before. They are looking for new homes in a friendly climate where they may live and plant their crops with reasonable security against the vagaries of Nature. Here, alone, where the waters of the mighty Colorado have been harnessed and are being brought in to meet the demands of domestic, agricultural and industrial use, can they find the solution to their problems. During the years since 1930, this potential migration has been dammed up behind a wall of frozen assets which is now melting away, opening the floodgates of the greatest migration of home-seekers which has ever been experienced in American history.

It requires little imagination to realize the result of completing the Colorado River Aqueduct which will bring in almost four times the amount of water that is supplied by the Owens River Aqueduct which increased our population from 350,000 in 1910 to 1,350,000 in 1936. Basing our claims upon past experience and with the added impetus of extraordinary advertising media and circumstances throughout drought-ridden states that compel attention to our controlled water supply, we have every right to expect a proportionate increase in wealth and population. The economic fundamentals are all present; namely, climate, water and cheap hydro-electric power. The latter - hydro-electric power which is a by-product of the great water-conservation at Boulder Dam - is inviting industry here, and this same industry means more homes and more farms to supply them with food. With all the boasted achievements of our present civilization man is still a very primitive creature. His first need is, has always been, and will always be the same - FOOD! FOOD! Where do we get it? How good is it? How much does it cost? From the Nomadic tribes of Arabia who roam with their flocks from season to season in search of grass, to the modern American who lives in the city apartment with its highly mechanized equipment, the elemental question is the same. "How well can we eat and how much does it cost?" Medical science is now telling our people that the fresher their food supply, the higher the rate of energy and health produced therefrom. With such facts being impressed upon them, and the general knowledge of the curative properties of sunshine and moderate climate, those who for any reason contemplate a change of residence will naturally seek a home where they can live out-of-doors and enjoy bountiful fresh food at reasonable cost.

If it were not for the additional water supply being brought in by the Colorado River Aqueduct, we would naturally hesitate to broadcast to the world our invitation to come and make homes here. Knowing the diminishing water reserves of many of our most fertile valleys, we could not conscientiously advise home-seekers of means and experience to come here in unlimited numbers, unless we knew that ever increasing shortage of water could be supplied from this new source.

Naturally, we turn for exemplification of our beliefs to the place with which we are personally most familiar. It happens that I cast my lot in the San Fernando Valley when it was a desert in 1910-- and on the prospect of an assured water supply, I was able to build my home and induce others to come in sufficient numbers to build a town. All of you know what is happening in that great valley today. Homes on garden acres are being built by the thousand with the result that a number of prosperous towns are growing as shopping centers to meet the requirements of those who enjoy the freedom, security, and independence of the garden home. Throughout California, that same story has been repeated over and over, wherever there was water supply to meet the demands of the settlers.

Heretofore, however, many of our new residents, coming from regions of abundant rainfall, have taken water for granted. They have looked upon the luxurious growth of our cultivated areas and thought that with energy and proper expenditure of time and money they could do likewise on whatever land they purchased. But the recent droughts have made them wise. They now look on our parched brown hills, and then to the verdant gardens and ask, "How is this miracle accomplished?" And having read of the tragedies of the insufficient rainfall, if they have not actually experienced them, they will not invest until they are satisfied that they are in a community secure from water shortage.

Yes, California is on the threshold of the destiny that is hers by virtue of her climate and location here on the Pacific, where East meets West. The Metropolitan Water District of Southern California, comprised of the thirteen forward-looking cities of the Coastal Plain of Anaheim, Beverly Hills, Burbank, Compton, Fullerton, Glendale, Long Beach, Los Angeles, Pasadena, San Marino, Santa Ana, Santa Monica, and Torrance, who were brave enough to assume the obligation of building the Colorado River Aqueduct has insured our citizens against the only enemy that would have limited our further growth. For in desert places unsupported

by an ample controlled water supply, dwindling water reserves have always brought in the creeping paralysis of the desert with investments reducted to dust.

With knowledge of the past and faith in the future, we are building a water system in keeping with our potentialities. While fulfilling a practical need, the Aqueduct will mark with distinction our citizens as possessed of courage, energy, and vision. For those outside the District who are content with facing only present needs, I would remind you of truth,proven by history, that "Without vision, the people perish."

* * * * *

Before the

WATER AND POWER RESOURCES COMMITTEE
of the Los Angeles Chamber of Commerce

November 16, 1937

Gentlemen:

I want to present on behalf of the Board of Directors of The Metropolitan Water District of Southern California the following considerations with regard to the proposal of the Power Bureau concerning the purchase of power originally allocated to the District, and for which the District will probably not have a use during its early years of operation.

As you know, the Power Bureau has made an offer to purchase power at the rate of one-half mill per kilowatt hour which will, under the present set-up, cost the District 1.63 mills per kilowatt hour. Hearings on this proposal are now under consideration before the Secretary of the Interior at Washington.

I do not propose to get into the legal complexities of the question. We have attorneys and engineers that are competent to do that. I will confine myself to broad economic fundamentals from the standpoint of the taxpayer and business man.

Back in 1930, when the allocations for power were made, the District was granted a right to 36% of the firm power and certain other rights and privileges. This amount of power was obviously in excess of what the District would be able to put to use during the early years of operation, but less than its later probably requirements. But in order to get Boulder Dam started, it was necessary for the District to make a firm contract, which we did.

Proposals now made by the Power Bureau are to purchase the power at less than half its cost to the District, the District having to make up to the Federal Government the deficit.

Considering this proposal, I want first to empahsize the character of the District. The District is composed of thirteen cities, twelve in addition to Los Angeles. They are distributed throughout the Coastal Plain from Santa Ana in Orange County to Santa Monica. Each one here is aware of the friction which went on for many years between Los Angeles and the outlying communities. The merits of the causes of disagreement, I am not prepared to discuss, but I will emphasize that the Metropolitan Water District,

through its eight years of existence, has functioned in complete harmony and accord. There has been no issue in these years in which Los Angeles and the other member cities of the District were not able to work out to their mutual satisfaction.

Los Angeles members of the Board of Directors are determined that this good feeling and spirit of cooperation shall not be interrupted but shall continue to prevail.

In this proposal of the Power Bureau, we are brought face to face with a situation in which the smaller cities are asked to assume a burden in favor of Los Angeles, in fact, amounts to a subsidy on their part to the Los Angeles City Power Bureau.

If Southern California had been treated with the same consideration that was accorded the other large projects inaugurated by the Federal Government, this question of power rates need never have arisen. If Boulder Dam had been constructed on the same basis as the projects of the Tennessee Valley Authority, the Grand Coulee Dam, and the Bonneville Dam, such power prices as offered by the Power Bureau would probably have been entirely reasonable. Of all these projects, the Boulder Dam and its related projects were the only ones requiring complete amortization at interest rates in excess of what the Federal Government pays for the money loaned. It is the only project without direct grants or financial concessions.½

Rathern than to have had this conflict of interest between the District and the Power Bureau, a concerted effort by these agencies should have been made to obtain from the Federal Government the same treatment as accorded to other similar projects. Steps have been taken to this end, but so far unsuccessfully. Our efforts at present should be directed to this end rathern than to dissipate our energies in internal friction or in endeavoring to obtain an advantage at the expense of the others.

The Power Bureau has stated emphatically that unless it obtains a concession in power rates at the expense of the District, it will abandon the construction of a third power line to Boulder Dam. Our engineers advise us after an intensive study of the situation that it would be much more economical for the Power Bureau to build a third line than to construct additional steam capacity in Southern California. This is a highly technical question, but

I believe the conclusion of our engineers is correct. Even if it were not so, I doubt whether the City of Los Angeles would be justified from other considerations in building another steam plant.

With rapid depletions of our gas reserves, so important and necessary in the continued industrial development of Southern California, it would be exceedingly unwise to put further demands upon them when hydroelectric energy is available at Boulder Dam. I am informed that a steam plant such as the city proposes would consume on an average of 900,000 barrels of oil or its equivalent annually. This would amount to 45,000,000 barrels in 50 years. Such a demand would sooner or later be reflected in increased costs of gas, oil, and electric power to Southern California consumers.

From the sentiment expressed by members of our Board, I believe that they will definitely oppose any sale of its power at Boulder Dam at less than the amount it costs the District.

The amount which the District stands to save by selling its power as proposed by the Power Bureau represents a comparatively small sum. Rather than enter into such an agreement, the District would be justified in using the power to pump large quantities of water over to the Coastal Plain and dispose of it to its members at little or possibly no cost. From a business standpoint, I believe that the conclusion is justified that the cost of delivering very cheap water would be more than offset by the increase in valuations and the growth of industry and agriculture.

We are now working on an intensive program of consolidating Los Angeles and Orange Counties into one continuous area within the Metropolitan Water District. With very cheap water, this move would be facilitated. In any event, it is inevitable.

We are at present experiencing one of the driest periods in the history of Southern California. Engineers inform us that the present period since last May has not been exceeded in dryness in fifty or sixty years. In the face of such circumstances, the District is not justified for a very nominal annual saving in releasing any of its power, even temporarily, unless it can do so at cost.

The purpose of the Board of Directors of the District is very definite. It is willing to cooperate with the Power Bureau of the City of Los Angeles if it can do so on a strictly economic basis and without any penalty on any of its member cities. We believe that it is very definitely and materially to the advantage of the Power Bureau to build its third transmission line in order to take full advantage of all power, both primary and secondary, available at Boulder Dam. We do not believe that the construction of additional steam generating plants is justified or to the best interests of Los Angeles and Southern California.

We believe that all agencies in Southern California should unite in the determined effort to obtain from the Federal Government a readjustment of the Boulder Power Contracts which would be fair to this area in comparison with what advantages and benefits are being accorded to other areas. We ask nothing more than we are justly entitled to in accordance with what the Federal Government is doing elsewhere. Above all, we are determined that nothing shall be permitted to transpire which will in any way jeopardize the harmonious relationship which exists between the cities comprising The Metropolitan Water District. To this end we respectfully ask your cooperation and support.

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THIRTY-FOURTH ANNUAL CONVENTION
of the
CALIFORNIA REAL ESTATE ASSOCIATION

October, 1938

"THE METROPOLITAN WATER DISTRICT AND REAL ESTATE"

Federal statistics reveal that only a third of the residents of California were born in our State. (In other words, two-thirds of our population have "come west"). A large percentage of these are from east of the Mississippi River. This condition, to a large degree undoubtedly accounts for the fact that so many people fail to grasp the water supply situation in Southern California. They have lived a large part of their lives in area where water was always made available, with rare exceptions, the main problems being to provide proper drainage and avoid industrial pollution. Their thinking on the subject is confused by the occasional torrential storms, such as we experienced last March, when streams overran their banks, houses were washed away, people were killed, and streets ran knee-deep in water. These occasional dramatic occurrences when all of our energies are devoted to getting rid of water overshadow the impression of our long dry summers and whole years with little or no rainfall. It is only the water man and the farmers who daily measure the levels in their falling wells who know the real situation. The dweller on the sixth floor of an apartment house has no contact with the water supply except at the end of the faucet.

Thirty some years ago I was a typical easterner with a typical eastern viewpoint on questions of water supply. Up to that time water had been the bane of my existence. In everything I did I had to fight water and it cost me many thousands of dollars to get rid of it.

In order to reveal the transformation of ideas concerning water and its uses through which the average easterner grows, I beg your indulgence in briefly recounting my own experiences.

As a young man, I was in the coal mining business in Sullivan County Indiana. This is a beautiful, well-watered country, typical of the states east of the Mississippi River, drained by the Wabash and other tributaries of the Ohio River. In our mining operations we had surplus water to contend with. One of my mines was named the "Swamp Angel." Every once in awhile a coal heading would be driven under bottom land and the creek would break through and pour into the mine, which meant the mine had to be shut down until we could get the water under control.

It was a case of fighting water all the time. On top of the ground and under the ground, there was generally too much of it. To cap matters off, it almost ruined my health and I was compelled to seek a desert environment.

My first experience with the desert was at Phoenix, Arixona, where I arrived just in time to participate in the boom that resulted from the building of the Roosevelt Dam and the supplying of water to that splendid desert valley. There I saw before my eyes the sand and cactus transformed into blooming gardens. I came on to Los Angeles after the turn of the century and bought a walnut grove on Florence Avenue in an area just south of the City limits of Florence. I bought it on the basis of a sworn statement as to its earnings, only to discover that the grove depended on its existence for a supply of sewage water which the health department immediately proceeded to condemn as a menace.

Because of the condition of my health I found it expedient to get further from the coast, so I bought a ranch up this side of the Antelope Valley, near the town of Acton. After building myself a 14 room house out of the natural stone, I proceeded to drill wells for water which my experience up to that time led me to believe existed everywhere under the surface. Well, when I got through drilling that ranch for water, it looked like a Swiss cheese, and I didn't have any more water than when I started.

About that time I first heard of the plans for the building of the Los Angeles Aqueduct from the Owens Valley. On the assurance of a plentiful supply from the never-failing streams of the High Sierras, I bought a section of land in San Fernando Valley upon which now stands the City of Van Nuys.

By this time, my education regarding water supply in desert country was well under way. I had abandoned the idea that water was to be found anywhere you looked for it, and began to place my confidence and dependence upon an assured supply. In the years before the Aqueduct water became available, I spent thousands of dollars running up pipe lines to the washes and spreading the water on the land with the hope of storing some in the soil for the summer season. With the coming of the Owens Valley Aqueduct and by the time we had paid the cost of building the tremendous distribution system throughout the San Fernando Valley, my education in water supply was about complete. I had learned from that

hard master - Experience - that in desert places not only life itself, but the prosperity of mankind, depends upon an abundant and controlled water supply. I knew that great cities, industries, commerce, and everything that man could build, however magnificent, was no better than the dependability of the water supply that was available. I knew then that thinking people did not buy land, but bought an interest in the water supply. The artery feeding all our urban activities and supporting our economic life has been that little line of steel and concrete that twists and winds across the Antelope Valley into the High Sierras.

The story of the growth of the City of Los Angeles from a cluster of adobe huts, a little over 150 years ago, to one of the large cities in the world today can be told in terms of water. From the founding of the City to the year 1862, the primary use to which the land was put was grazing, and 40¢ an acre was a good price. The great drought of that year practically put an end to the industry. Cattle herds had grown beyond the water supply of the territory. Next came the great grain ranches. Some of you here today no doubt recall the time when the San Fernando Valley and elsewhere on the Coastal Plain were great seas of waving grain. This period ended in the 80's with the introduction of efficient pumping machinery and its use in irrigation. With it came the great citrus industry which without a constant supply of water would vanish in a comparatively few years. Wild grasses and chaparral would take possession of the land again and it would revert to desert.

It is interesting to speculate what would have been the condition in Southern California had the Owens Valley Aqueduct never been built. When "Chief Mulholland" disclosed his vision of bringing water from the High Sierras there were many who scoffed and said that Los Angeles would never need it. Plans had been proposed for bringing water from the San Gabriel Valley. The city undoubtedly could have gotten a supply from that source which would have filled an immediate need. It would have been, however, at the expense of the balance of the Coastal Plain. Had the scheme been carried out, where you see beautiful groves and homes and communities in the San Gabriel Valley, there would today have been a great expanse of worthless desert waste. Fortunately for the people of Southern California, the more difficult, the sounder, and the far seeing-plan of building the Aqueduct was adopted.

With the building of the Colorado River Aqueduct I believe we have again followed the sound and far-seeing

plan. Many years of contact with the water supply of Southern California, first in connection with my own investments, and then as a member of the water and power Commission of the City of Los Angeles and later as Chairman of the Board of Directors of the Metropolitan Water District, I continually find many of our people do not grasp the fact that they are in reality living in a desert environment. They think of their real estate values in terms of people, rather than in terms of water. When you stop to think of it, Southern California is only an artificial oasis in the desert. It is probably the only community in the world supporting millions of people that is located over 300 miles from an important river or a large body of fresh water. Our average rainfall of 15 inches compares with from two to four times this amount in the other major centers of population in the United States, and that is only part of the story. Our meager rainfall comes in three or four months and the balance of the year is dry. Large reservoir sites do not exist and if they did they would be unusable because of the high rate of evaporation. And still further, our 15 inches average rainfall is made up of years running from little more than nothing to as high as 36 inches. Therefore, the average means practically nothing when for four or five years in succession it has been much less. It is the years of minimum rainfall that measure our security. We have been living off waters stored for countless ages in our underground basins. It is like the individual living off his bank account without any income - sooner or later he goes broke.

It was this condition that brought about the construction of the Colorado River Aqueduct. Where the wealth and security of millions of people is involved, there can be no gambling with their water supply. It must be as certain as the rising of the sun. Within the next year the Colorado River Aqueduct will go into operation. This great project which was started 15 years ago is now nearing completion. That little stream of water from the High Sierras will soon be relieved of its sole responsibility and will have the assistance of another aqueduct 300 miles long, bringing the melted snows of the Rocky Mountains to Southern California. No longer will business and industry say that they cannot afford to take the chance on Southern California because she has not sufficient water. For years the engineers sent out be eastern industrial concerns to investigate the feasibility of locating plants in Southern California have reported to their prinicpals that Southern California has a precarious water supply and have pointed out that this area has not experienced a major drought since 1900 as severe as those recorded prior to that time. You and I know of industries

that have demanded a guaranteed water supply before they would accept a site for a factory. This hesitancy has now disappeared. Industries seeking to locate in Southern California are eliminating the question of water supply and confining themselves entirely to economic considerations. Our realty values and our investments are at last to be placed on a really sound and secure foundation. If not a drop of water were used out of the Colorado River Aqueduct, it is worth every dollar it cost in terms of insurance to existing values and to the safety it guarantees to the inevitable expansion of population and industry. You have your insurance and in addition a sound investment which will pay handsome returns in the years to come.

In addition, you have had the benefits of this construction beginning in 1932 during the worst depression this country has ever experienced. 14,000 men have been given employment on this project and I venture to say that there is probably not an individual or business concern in Southern California that has not directly benefited by the millions of dollars of expenditures for materials and supplies which went into the construction. And this project was not cutting weeds and raking leaves or piling dirt; it was an honest dollar's worth for every dollar spent and will remain a community asset for all time to come.

Like all great, forward-looking projects, built as an insurance against drought and to supply future needs, the Colorado River Aqueduct cannot now be fully appreciated. As always in the past, population and industry will flow to those areas having this assured water supply, which is truly the life-blood of all future development. Too late, many communities will awaken to find this large and valuable water supply already appropriated by those whose vision could grasp its importance.

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Before the

ASSOCIATED CHAMBERS OF COMMERCE OF ORANGE COUNTY

December 13, 1938

Mr. Chairman, and members and guests of the associated Chambers of Commerce of Orange County:

I come here tonight on the invitation of Colonel Finley and to pay my respects to him as a grand old water crusader who has blazed the water trail through these arid western states, helping to get the Colorado River Compact signed, that it might be possible to usher in the day when more water would be made available to Southern California. That day will soon be at hand. The San Jacinto Tunnel that could not be driven, according to many, is licked; the big pumps at the River that could not possibly work have been turned over with results even better than anticipated. They will be officially christened on January 7, and a river of liquid gold will be started on its way to the Thirteen Golden Cities that have had the vision, the guts, and the backbone to know what they had to have and where to get it.

I did not come here this evening to try to sell you this Aqueduct nor to participate in your local discussion about the need for water in Orange County. I have been on this water trail too long to waste any time arguing that you need more than the erratic average of 15 inches of annual rainfall to produce profitable crops or provide beautiful homes in this semi-desert environment. Water arguments and water lawsuits never end.

I, personally, as one of the Directors of The Metropolitan Water District of Southern Californi, believe that the policy of the Board should be to finish up the things we started out to do when we voted the bonds; namely, lay the mains to deliver water to the thirteen cities, cut out all unnecessary expenses, and conserve the tremendous balance we have saved on this project and next summer, when water starts to flow into Cajalco Reservoir, invite all of Southern California, from Santa Barbara to San Diego, to come to our party and help us celebrate. Then I propose that we just repeat the speech that William Mulholland made when he brought the Owens Valley water into the San Fernando Valley Reservoir, namely: "Here it is, come and get it." At that time I was in the same position you men are in now. I had large investments in the San Fernando Valley,

my wells were inadequate, and the water tables were being lowered. We argued about the quality of water, that it had boron, florine, salt - and even dead cattle - in it, and Mulholland's only reply to all this technical discussion of chemists and engineers was, "There is not a bellyache in a barrel of it." Then we got ugly and said, "Well, suppose we do not come and get it, you what will you do with it?" His reply was, "If you do not come and get it, you will not need it, and someone else will get it and someone else will need it." To realize today how true that statement is, just drive out into the San Fernando Valley and stop at the Los Angeles branch city hall at Van Nuys and look up our building record - 500 to 600 new homes every month. The original townsite of Van Nuys, one square mile, was purchased in 1910 for $50 per acre, or $32,000 for the square mile; 50 foot business lots are now selling for over what the square mile cost in 1910, with only a 15 inch average rainfall, or let us say, with insufficient water. In other words, you do not buy land in Southern California, you buy water. The land is thrown in. The City of Los Angeles has placed about 100 second feet of water on the floor of the San Fernando Valley since the coming of the Owens River Aqueduct and, including Burbank and Glendale, which have grown largely on this water, we have in the neighborhood of 150,000 acres originally in 1910 worth less, rather than more, than $50 per acre without water. Now I think it would average $2,000 an acre if you include the towns, or $300,000,000. In other words, 100 second feet of water has created more than enough wealth to build the Colorado River Aqueduct, which will bring in 15 times that amount of water, or 1500 second feet.

Now I am ahead of my story. Let us go back to where Mulholland told us to come to his terminal storage reservoir and get it. We heard that the San Gabriel Valley was figuring on coming to get additional water, so we went to Mulholland and said, "We want the water." He replied, "Annex to the City of Los Angeles, not a dollar's worth will be sold outside; assume your share of the City's pending debt; form a District and bond yourselves to build your own distributing system and pay for one-half of the 6 foot steel main across the Valley to the heart of Los Angeles." And we did, and everyone today who knows, admits it was the wisest decision ever made affecting the destiny of that Valley.

The Metropolitan Water District of Southern California has just worked out a legal exchange agreement with the City of Los Angeles to deliver water to Beverly Hills and Santa Monica. The people in Santa Monica have been thoroughly aroused to their water needs by the recent fires. Santa Monica and up along the coast to Santa Barbara, including the Simi Valley, are in need of more water than the District can safely agree to furnish, because the Thirteen Golden Cities are surely going to see that the water is not going to be spread so thin that there will ever be a shortage. We are not bringing in sufficient water to meet all the needs of the Coastal Plain of Southern California, and those communities which are fortunate enough to become a part of the District will attract the future growth and development that only an ample, dependable, controlled water supply will attract. In a desert county where so many wish to live, water will decide where growth will take place. It will only be sold in the District, and districts wishing to annex must include all the territories which will benefit from the building up of underground reserves.

I said that next year the District will celebrate the delivery of Colorado River water into Southern California. We invite you all to be present and to participate in that great occasion. Following the advent of the water, the District will be in a position to meet and solve the operating problems in a sound and constructive manner. In the meantime, while the reservoirs are being seasoned, the District's right to accumulate water in the Boulder Canyon reservoir will be in effect. Eventually we will have stored up there a credit of almost 5,000,000 acre feet of water that will make it certain for all time that regardless of what may reasonably happen to our rainfall, the District will always have water to draw.

As to annexations to the District, this is a problem which I believe must be dealt with in a way to be fair and just, especially to the cities that built the Aqueduct. From time to time we have heard reports that Orange County might possibly annex to the District. Similar suggestions have been made with respect to the balance of Los Angeles County not in the District and with respect to sections of Ventura County. Of one thing we can be certain, and that is that sooner or

later the dry cycle will arrive that will compel these areas to seek water from the Aqueduct. In my opinion, the important thing is not that additional areas should be annexed to the District, but rather that if and when they do, the set-up shall be sound and properly organized.

The assessed valuation now of almost two billion dollars is certainly sufficient to carry the project indefinitely. If all of the balance of Orange County were annexed to the District tomorrow, it would represent an increase in assessed valuation of only something like 8%. The tax cost to the present member cities without any sale of water is only 40¢ per one hundred dollars of assessed valuation, and probably will not be much, if any, greater, even though no additional annexations take place.

This means that for a man who has a home place or ranch worth $10,000 assessed at one-half this amount, or $5,000, his maximum contribution to the project would probably not be greater than $20, or 6¢ a day. Or as another illustration, if he had 160 acres of dry land assessed at $25 an acre, or $4,000, his contribution would be less than 5¢ a day.

I think you will all agree that the value of having an assured water supply and the right to purchase all the water that could be used is certainly worth 5¢ or 6¢ a day. It would only represent a small percentage of the cost of drinks, or smokes, or motion picture entertainment.

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ANNUAL MEETING OF THE

LOS ANGELES REALTY BOARD

February 3, 1939

Mr. Chairman, Ladies and Gentlemen:

I want to preface the few remarks that I am going to make with an expression of appreciation to the L s Angeles Realty Board on behalf of the Board of Directors of The Metropolitan Water District of Southern California.

In all the many years that I have been identified with the question of an adequate water supply for Southern California, I have no recollection of a time when I did not feel that I had the support of the outstanding members of your organization. To mention just a few names of those whose assistance comes particularly to my mind: your past local and national president, Mr. G. D. Robertson; Tom Ingersoll, who was a grand old warrior; Avery McCarthy; old Bill Hollingsworth; Cliff Tatum; and your president, Mr. B. O. Miller. There were, of course, many others.

To one uninformed on the basic facts, a natural question is why have men of the real estate profession always supported projects designed to bring in additional water supplies? These men all have a heavy stake in the community, are personally large owners of property, and yet they support the construction of expensive aqueducts, the bonds for which are liens against their property and involve additional taxes. I know the answer to that question and you know the answer. In Southern California an adequate water supply is not a frill or a luxury; it is an absolute necessity and an investment. Most real estate men, especially the old-timers, of which I see many in this audience, have learned the value of water the hard way - the way of personal experience - just as I did.

You have learned the astonishing fact that in the real estate profession you are not engaged in the buying and selling of land and building, strange as it may seem. What you have learned is that you are buying and selling the right to use water. There is no value to any land or to any building, no matter how tall or how magnificent, unless it has water. If, in some inconceivable way, the City of Los Angeles were suddenly transported to the dry waste of Desert Center, the roads

in every direction would be jammed with people fleeing in search of water. In a few days there would be nothing but empty stores and vacant windows; and within a few years the sands of the desert would have filled the stores and set about tirelessly to obliterate this unnatural man-made thing from the face of barren nature, just as was the case in Egypt, Persia, and Mesopotamia. It is the water that makes life possible and therefore it is the water that gives the value. The difference to a community between having water and not having water is the difference between life and death. So that is the reason why I believe we have always had your support. You understood these basic fundamental truths with regard to Southern California. There have been some conscientious and honest people who have not understood these principles. In fact, I must confess that until experience had taught me a very bitter and costly lesson, I did not understand them myself. We have here within a very small compass everything that humankind could want. Our climate is mild and healthful and yet invigorating. We have food in all its infinite varieties. Our available resources of fuel and raw materials are unequaled. By land and sea and air we have direct communications and transportation with all parts of the world. For our recreation we have the sea and the mountains, the lakes and the desert. There is no lack of fertile land for expansion and for the accommodations of many millions who will join us at their first opportunity. Where else in the world can such a tabulation of natural assets be listed? In the past our one great deficiency, the ominous ghost at our banquet, has been the threat of drought; with the coming of the Colorado River water this year, that specter has been laid and his presence will never haunt us again, certainly not within generations of the great grandchildren of those here present.

To the cities which have financed this project it has required great courage and foresight to make such a large investment during the uncertain years through which we are passing. We of the District have done the job as best we knew how and our estimates indicate that we will save twenty million dollars from the bonds which you authorized. The cities that have this water will reap the hundredfold harvest in the years to come. With their assured water supply, people and industry will flow to them just as surely as the steel goes to the magnet. In fact, people who come to Southern California must come to the places where they can get water and the only places where their investments can be certain of absolute security is to the thirteen cities which will be connected to the Colorado River Aqueduct.

* * * * *

February 21, 1939

Mr. Chairman, distinguished guests, friends:

During the 28 years of our civic existence many men have prophesied, guessed, wished, hoped, and speculated, more or less, as to our course into the future. It is only natural that we should all be deeply concerned with the growth of population and wealth of our community.

As bearing on our destiny, it is most enlightening to check what men of vision have had to say about the destiny of Southern California.

Almost thirty years ago, E. H. Harriman, the greatest railroad genius of all time and one of this nation's greatest builders, is reported to have said at a banquet in New York after returning from Southern California: "Gentlemen, in a hundred years it will not be Paris, Berlin, London, or New York that is the biggest city in the world, but it will be Los Angeles, California, providing sufficient water can be imported.

When we were getting the appropriation to start Hoover Dam, Dr. Ray Lyman Wilbur, President of Stanford University and at that time Secretary of the Interior, said, "There are two great migrations of people taking place in the world today, one into Manchuria, and the other into Southern California."

Two weeks ago at the annual banquet of the Los Angeles Realty Board, Dr. Polyzoides of the University of Southern California, a lecturer, writer, and profound student of world affairs, said, "Europe is fast drifting toward political and economic bankruptcy; our eastern seabord is reflecting the European decline; the Pacific area is fast coming into its own. With the coming of the Pacific era, Los Angeles is destined to become the world's largest city."

Many years ago and before most you had made your homes here, I became convinced that when the merits of the San Fernando Valley were fully discovered, one-half of the next million people locating in Los Angeles would build their homes within this mountain-walled garden. I am proud of that prediction and I am more convinced today than ever before of its accuracy.

A well-known national speaker recently on the radio made a remark which has an important bearing on this subject. He said in effect that an analysis of the stability of the age-old country of England in comparison with

conditions as they exist in the United States reveals an important difference in the habits of the two people. In England when a man acquires independence or competency he immediately moves into the country. In the United States when a man arrives at economic independence he immediately migrates to the large cities. From the standpoint of healthful living, practically everyone will admit and be able to point out the error in the American system.

Here in the San Fernando Valley we have the unique combination of being able to give people the advantage of a rural environment within a large city.

That this growth which was predicted so many years ago is now taking place is revealed by the fact that 942 building permits were issued in the San Fernando Valley during the month of January, 1939, exclusive of Burbank and San Fernando which are an integral part of the Valley.

The Colorado River Aqueduct is bringing in water sufficient to meet the needs of ten million people. Without this water the possibility of continued growth such as we have experienced during the past thirty years would inevitably be stifled and killed. The Pacific era is at hand. Like the onrush of the water now on its way to Southern California from Parker Lake on the Colorado River, a flood of growth and development is pouring through the passes into the San Fernando Valley.

Here in the San Fernando Valley our feet are firmly planted in the Good Earth which always has been and always will be a source of the fundamental element of life - food.

Above and around and among us are the Stars - that lead the world to our doors - and lead us ever on to a higher range of vision!

The magi have caught the vision. The Stars lead on. Let us follow wisely.

* * * * *

Before the

VAN NUYS KIWANIS CLUB

February 9, 1939

Mr. President, fellow Kiwanians, and friends:

The picture you are about to see represents the realization of dreams and the culmination of many years of unceasing work. Especially here in our own San Fernando Valley we are witnessing the realization of dreams and the rewards of faithful work and waiting. In this hour when dreams are coming true, let me recall a few prophecies.

Almost thirty years ago, E. H. Harriman, the greatest railroad genius of all time and one of this nation's greatest builders, is reported to have said at a banquet in New York after returning from Southern California: "Gentlemen, in a hundred years it will not be Paris, Berlin, London, or New York that is the biggest city in the world, but it will be Los Angeles, California, providing sufficient water can be imported."

When we were getting the appropriation to start Hoover Dam, Dr. Ray Lyman Wilbur, President of Stanford University and at that time Secretary of the Interior, said, "There are two great migrations of people taking place in the world today, one into Manchuria and the other into Southern California."

Last Saturday night at the annual banquet of the Los Angeles Realty Board, Dr. Polyzoides of the University of Southern California, a lecturer, writer, and profound student of world affairs, said, "Europe is fast drifting toward political and economic bankruptcy; our eastern seaboard is reflecting the European decline; the Pacific area is fast coming into its own. With the coming of the Pacific era, Los Angeles is destined to become the world's greatest city."

Many years ago I said that the merits of the San Fernando Valley are fully discovered, one-half of the next million people locating in Los Angeles will build their homes within this mountain-walled garden.

This very same prediction, I understand, was made two years ago by that veteran prophet, William May Garland,

who has never yet overestimated the growth of our city, though his predictions have sounded fantastic to men of less vision.

But here is a fact substantiating these prophecies - 942 building permits were issued in the San Fernando Valley during the month of January, 1939. This is our evidence that the San Fernando Valley has not only been discovered, but has gained that momentum of growth which nothing short of catastrophe can stop. We are bringing in water sufficient to meet the needs of ten million people. The Pacific era is at hand. Like the onrush of the water now on its wat to Southern California from Parker Lake on the Colorado River, a flood of growth and development is pouring through the passes into the San Fernando Valley. We must be prepared to go forward with it.

In building for the future, in order to realize to the fullest extent the rewards to which our labors and perserverance entitle us, let us be guided by the lessons which our experience has taught us. "There are tides in the affairs of men which, taken at their flood, lean on to fortune." Now is our hour of opportunity. Whether we make the most of it time alone will tell.

* * * *

NORTH HOLLYWOOD KIWANIS CLUB

March 2, 1939

We are very definitely in a period of decentralization. America is returning to that rural life in which this great nation was born and bred.

In old England, with its centuries of accumulated experience in social organization, decentralization has been going on for centuries. The mark of distinction there is to own a country estate, however small. Long ago, they learned that the confinement of city life is not a healthful or natural way for a human being to spend his short span of years. England knows what we, as a young nation, are just discovering - that the noise, the excitement, and the nervous strain of living in big cities does not begin to have the wholesomeness, nor yeild the real sense of values gained by a country environment, close to gardens, flowers, and animals - our under the trees and stars such as we enjoy here in the San Fernando Valley.

In crowded Germany this same thing is reported taking place. No doubt it has to some extent a military significance. Since the coming of the airplane they realize that congested manufacturing districts represent ideal bombing targets and they are now distributing their important manufacturing plants throughout the rural districts. They also realize the advantages of having their people live in the country where they can produce a part of their own food supply while maintaining production schedules in the factories.

The strength of France in the past has been largely derived from her strong peasant class. The small farms passed on generation after generation in the same families have furnished the nation with the strong stock from which have been drawn the men that have maintained her military stability through an interminable succession of wars.

We could go on to cite the illustration of the Scandinavian countries, where there are few large cities and where most of the people live in small villages close to the soil and with their industrical activity scattered throughout the country.

Up until forty or fifty years ago the United Sates has been a rural country, primarily because of the great abundance of land. With the intensive industrialization since that time the farm boys have been attracted

by the glamour of the big cities. This process was tremendously accelerated during the excitement of the war and resulted in a great mass-shifting of the American population. The inflationary prices paid for farm products proved very profitable to the mid-western farmers who sold their farms and moved to the cities. There they revelled in the luxuries only provided by perfectly appointed apartments, electric lights, furnace heat, telephone service, hot and cold water twenty-four hours a day, and the idea of "being in the midst of things."

But science was moving rapidly. Soon the picture changed. Rural electrification, carrying with it automatic heat and water, and all the modern devices to make housekeeping easy and efficient; good roads all over the country and the radio to bring the world into the home and automobile - these made it possible to enjoy all city conveniences with the healthful environment of rural life. The American people, with a natural yen for the land on which their forebears lived, have turned from the city to seek suburban advantages.

I have pointed out the foregoing to show what these social changes mean to the San Fernando Valley. I do not mean to imply that we are abandoning large cities completely. We will always have them. But gradually their character will change. It will always be necessary that a great many financial, industrial and commercial activities, to be carried out efficiently, be grouped together. But with electric power and efficient transportation available everywhere it is no longer necessary for industries to remain in congested areas. The cities of the future will spread out into great expanses of small farms and garden acres, such as we have here in the San Fernando Valley. It is not an accident that the San Fernando Valley is now taking out about half the building permits of the entire city of Los Angeles - it is the process of decentralization in operation. People are moving out of the hotels and apartments to the more healthful and pleasant surroundings of the country with all the conveniences which the city alone used to provide.

Many years ago I predicted that when the advantages of the San Fernando Valley were fully recognized, one-half of the next million increase in the population of Los Angeles would come to this mountain-walled garden. I believe that prediction is now comint true. It was made possible because

we have here an adequate and sufficient supply of wholesome water for all our purposes. The Colorado River Aqueduct now being completed has made our growth possible. As long as the City of Los Angeles depended solely upon the Owens Valley Aqueduct the population of the San Fernando Valley was insecure. As the domestic and industrial demand of the city grew and the local water levels all over Southern California dropped year after year, we here in the Valley realized that the time was not far distant when we could not be certain of obtaining all the water we needed from the Owens Valley Aqueduct.

The coming water from the Colorado River has assured an abundance of this prime necessity of life, and I think we can in no small degree attribute our present growth to the realization of that insurance and security. We have here all that education, science, and art have to offer, together with the enjoyment of a country environment. Now that we have an unlimited water supply, the drawing power of the Valley and the population is limited only by the extent to which we take advantage of the opportunities.

The setup is ideal. It remains for us to see that we meet this opportunity and build soundly and wisely for the future.

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Luncheon Meeting of the

LOS ANGELES REALTY BOARD

Ambassador Hotel, March 9, 1939

Most of you here heard Dr. Polyzoides say at the annual banquet of the Los Angeles Realty Board that "This is certainly going to be the world city of the future, the center of one thousand million human beings, (living around the rim of the Pacific) active, moving, progressing, and building their new civilization. Let us lay the foundation of this work. Let us think big, act big, and spend big, and the new Pacific era will be ours." I give you his actual words as reported in the newspaper. They are very significant. Dr. Polyzoides speaks as a student of world affairs. I think we can fairly say that his opinion represents a qualified, impartial judgment based upon World facts.

We in Southern California have a reputation of being enthusiastic boosters. This is not an accident. The fact remains that we have something to boost about. No other area in the world has the combination of climate, soil fertility, natural resources, facilities for commerce, and the variety of health-giving opportunities for recreation as has Southern California. These advantages were present and recognized even before the white man appeared with his revolutionary developments. In 1769, 170 years ago, the dauntless Father Crespi wrote in his diary on the first overland trip by white man in this area, arriving at the site of the present City of Los Angeles, "It has good land for plantint all kinds of grain and seeds, and is the most suitable site of all that we have seen for a Mission, for it has all the requisites for a large settlement." This sentiment expressed by one of the first white men to enter the pages of Southern California history has been echoed and reechoed down through the years. Never in any country have the pioneers and their successors been so constantly imbued with a feeling that the possibilities of their new land were unlimited. Something in the soil and the air and in the sunshine seems to have given them a breath of vision and the energy and enthusiasm to build in accordance with that vision. True, there have been times when the outlook was dark. When the periodical great droughts have come upon them, burning up their crops, destroying their herds by the thousands, they could feel the dry boney clutch of the desert choking out their lives. With characteristic resourcefulness and ingenuity they discovered means of making use of the priceless water which nature through countless ages had stored in the underground reservoirs. When increasing

population threatened to exhaust that limited supply of water, with unprecedented vision, courage, and determination they undertook and completed the Owens Valley Aqueduct.

This year the coming of Colorado River water insures us against the fear of drought sweeping down to retard or destroy our great community. The desert has been pushed beyond the mountains for all time. In all the many years since I came to Southern California I have never for one moment felt that we were approaching the end of our development. With all the growth that lies behind us we have just begun. Our resources and our opportunities have only been scratched. It is all too easy, especially in troublesome times, when business is poor and taxes are high, when conflict and hatred prevail at home and abroad, to think that we have come to an end. We are like people walking in a dark tunnel who can see no opening ahead. Under such circumstances the best way to clear the mind and recapture the vision is to review the trail along which we have come. Anyone who can travel page by page down the history of Southern California and not feel that a still greater future lies ahead is indeed lacking in vision.

Personally, I am absolutely in accord with Dr. Polyzoides. I think the time will come when on the Coastal Plain of Southern California will exist the greatest city of all time and the highest level of civilization the world has ever known. I will undertake to tell you in the few minutes remaining some of the reasons why I think this is so.

In the first place, we now have the water upon which our daily existence depends. Industrialists seeking to locate in this area are no longer concerned as to whether their expensive plants will have to be shut down or curtailed because of water shortage.

Next, whether we realize it or not, we are growing daily and have grown all through the depression. I think the 1940 census will be a pleasant surprise to many of our pessimists.

A good index of growth is water consumption. In spite of the depressed conditions the water consumption in the City of Los Angeles in the last five years increased by nine billion, one hundred-fifty million gallons per year. The increases in water consumption among the thirteen cities in the Metropolitan Water District ranged up to 76% in the same period.

In the past 16 years Los Angeles County has grown from 37th to 5th place in the value of its manufactured products, and in the same period increased its production from 21% to 40% of the total within the State. It is interesting to note that no single group of manufacturing employs more than 6% of the factory workers. This is significant as indicating how diversified our economy is eventually becoming. Our development is not lopsided but well balanced and integrated. In the past two years 22 nationally-known manufacturers located plants in Los Angeles County and 26 made plant expansions.

Mr. Don Thomas of the All-Year Club has pointed out recently some very significant facts that have a bearing upon the growth of Southern California. From his exhaustive studies he reports that out-of-state visitors spend in California about two hundred, eighty-nine million dollars a year. He has also found that over a period of time one of every ten tourists to California returns to locate in this State and contributes to the investment and building up of this area. Eighty-five out of every one hundred homes built for owner occupancy are built by ex-tourists.

As indicating what we may expect in the way of continued growth, the 1930 census reveals the following significant facts:

In the first ten years of this century Los Angeles County received one out of eight of all persons migrating to the eleven western states. In the second ten years, to 1920, this increased to one out of every five. And in the period from 1920 to 1930, two out of every five moving to the eleven western states settled in Los Angeles County.

Many do not realize that the Los Angeles metropolitan area has increased from 30,000 to about two and one-half millions in the short space of fifty years. This increase represents a greater number of people than the population of the States of Oregon, Montana, Wyoming, Nevada and Arizona all put together. California has more citizens from other states than any other state in the Union and at the same time has the smallest percentage of her native born living in other states. This shows that we are not only able to attract more from elsewhere than any other state, but succeed in holding our own native born.

Some of our pessimistic friends have stated that while all of this has been true in the past, that things are changed and that the future will be different. They say that the national rate of population increase is constantly diminishing and that consequently growth is becoming static. Stuart Chase in a recent article discusses this question very sanely and comprehensively. He points out that while population is rapidly leveling off, there are new social forces now in operation which will cause real estate in the future to be in brisk demand in Southern California and in Florida, contrary to the demand for real estate generally. As the average age level increases, due to the declining birth rate, the desire and incentive to move to a congenial climate will increase. The rapid extension of old age pension plans will naturally accelerate this movement. As people are able to retire, the lure of Southern California will become proportionately greater.

As a final justification for optimism, let me quote from an authentic economic report just out of Washington. - Barring war, the economic outlook is better, more healthy, than at any other time in the past decade. It is an enormous gain that virtually all organized elements now admit that business alone and not the Government can achieve national well-being. This means that venturesome men and hesitant established business may again lift up their eyes. -

The eyes of the World are on California. The Pacific era is at hand. With an ample, dependable, controlled water supply, with an abundance of hydro-electric power, with an ever-increasing traveling public, daily discoverng our manifold advantages, with the Government returning to those sound economic fundamentals which made America great, population and industry are again on the march.

Lift up your eyes. Look about you. See what it means to again double our growth and development in ten years as we did every ten years from 1900 to 1930.

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Before the

Building Contractors Association

Hollywood Athletic Club, March 30, 1939

Mr. Chairman, and members of the Building Contractors Association:

Recently I attended a meeting of the Los Angeles Realty Board at which Dr. Polyzoides of the University of Southern California was the principal speaker. One statement which he made was particularly interesting and impressive to me. He said, "Los Angeles is certainly going to be the world city of the future, the center of one thousand million human beings (including all those living around the rim of the Pacific) active, moving, progressing, and building their new civilization. Let us lay the foundation of this work. Let us think big, act big, and spend big, and the new Pacific era will be ours." I give you his actual words as reported in the newspaper. They are very significant. Dr. Polyzoides speaks as a student of world affairs. I think we can fairly say that his opinion represents a sound and impartial judgment based upon world facts.

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by the thousands, they could feel the dry boney clutch of the desert choking out their lives. With characteristic resourcefulness and ingenuity they discovered means of making use of the priceless water which nature through countless ages had stored in the underground reservoirs. When increasing population threatened to exhaust that limited supply of water, with unprecedented vision, courage and determination they undertook and completed the Owens Valley Aqueduct.

This year the coming of Colorado River water insures us against the fear of drought sweeping down to retard or destroy our great community. The desert has been pushed beyond the mountains for all time. In all the many years since I came to Southern California I have never for one moment felt that we were approaching the end of our development. With all the growth that lies behind us we have just begun. Our resources and our opportunities have only been scratched. It is all too easy, especially in troublesome times, when business is poor and taxes are high, when conflict and hatred prevail at home and abroad, to think that we have come to an end. We are like people walking in a dark tunnel who can see no opening ahead. Under such circumstances the best way to clear the mind and recapture the vision is to review the trail along which we have come. Anyone who can travel page by page down the history of Southern California and not feel that a still greater future lies ahead is indeed lacking in vision.

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In the first place, we now have the water upon which our daily existence depends. Industrialists seeking to locate in this area no longer are concrened as to whether their expensive plants will have to be shut down or curtailed because of water shortage.

Next, whether we realize it or not, we are growing daily and have grown all through the depression. I think the 1940 census will be a pleasant surprise to many of our pessimists.

A good index of growth is water consumption. In spite of the depressed conditions the water consumption in the City of Los Angeles in the last five years increased by nine billion, one hundred-fifty million gallons per year. The increases in water consumption among the thirteen cities in the Metropolitan Water District ranged up to 76% in the same period.

In the past 16 years Los Angeles County has grown from 37th to 5th place in the value of its manufactured products, and in the same period increased its production from 21% to 40% of the total within the State. It is interesting to note that no single group of manufacturing employs more than 6% of the factory workers. This is significant as indicating how diversified our economy is eventually becoming. Our development is not lopsided, but well balanced and integrated. In the past two years 22 nationally-known manufacturers located plants in Los Angeles County and 26 made plant expansions.

Mr. Don Thomas of the All-Year Club has pointed out recently some very significant facts that have a bearing upon the growth of Southern California. These facts are of especial interest and concern to the home building industry. From his exhaustive studies he reports that out-of-state visitors spend in California about two hundred and eighty-nine million dollars a year. He also has found that over a period of time one of every ten tourists to California returns to locate in this State and contributes to the investment and building up of this area. Eighty-five out of every one hundred homes built for owner occupancy are built by ex-tourists. The prosperity of the building industry clearly depends to a very large extent on our great ability to draw people from every part of the nation.

As indicating what we may expect in the way of continued growth, the 1930 census reveals the following significant facts:

In the first ten years of this century Los Angeles County received one out of eight of all persons migrating to the eleven western states. In the second ten years, to 1920, this increased to one out of every five. And in the period from 1920 to 1930, two out of every five moving to the eleven western states settled in Los Angeles County.

Many do not realize that the Los Angeles metropolitan area has increased from 30,000 to about two and

one-half millions in the short space of fifty years. This increase represents a greater number of people than the population of the States of Oregon, Montana, Wyoming, Nevada, and Arizona all put together. California has more citizens from other states than any other state in the Union and at the same time has the smallest percentage of her native born living in other states. This shows that we are not only able to attract more from elsewhere than any other state, but also succeed in holding our own native born.

Some of our pessimistic friends have stated that while all of this has been true in the past, that things are changed and that the future will be different. They say that the national rate of population increase is constantly diminishing and that consequently growth is becoming static. Stuart Chase in a recent article discusses this question very sanely and comprehensively. He points out that while population is rapidly leveling off, there are new social forces now in operation which will cause real estate in the future to be in brisk demand in Southern California and in Florida, contrary to the demand for real estate generally. As the average age level increases, due to the declining birth rate, the desire and incentive to move to a congenial climate will increase. The rapid extension of old age pension plans will naturally accelerate this movement. As people are able to retire, the lure of Southern California will become proportionately greater.

As an indication of one of the forces operating to increase population in Southern California, we need only consider the aviation industry. This industry is scouring the country to obtain qualified workmen, particularly the industrial centers of the east. They have no expectation of obtaining men qualified in aviation work because such men are already at work, but are seeking men who have obtained their mechanical experience in the manufacture of automobiles and other industries. A few days ago the newspaper reported that within a short time 2500 additional men would be put to work in the aviation plants of Southern California.

As an illustration of what is happening, we have the Consolidated Aircraft Company in San Diego. When they moved out to their present location in that city, a large part of their staff and workmen, together with their families, followed the plant. For months after they started operation it was interesting to observe that nine out of ten cars parked along the streets bore New York license plates.

We must remember that the industry is just in its infancy. It is in the position today that railroads were one hundred years ago. In those days railroad wrecks were frequent and travel so hazardous that only the more courageous or reckless people dared to use them. This industry will undoubtedly continue to grow and will become increasingly localized just as the motion picture industry, in the favorable environment of Southern California.

To mention another industry which has great potentialities of drawing people to Southern California, there is television. Undoubtedly, this development will of necessity be closely related to the moving picture industry. Consider what it would mean to Southern California if the investment and employment paid by the moving picture industry were to be doubled or even become only half again as great.

In a similar vein any student of industry could go on to cite other equally pertinent illustrations. We have just begun to develop our basic industries. The hardest part of our development to achieve is now behind us. We have left the toddling stage. Never before have we had the population and the resources of power and water offering security and inducement to industry. Colorado River water and large quantities of cheap hydro-electric power will offer attractions to basic industries just as the magnet draws the steel.

Recently I read an economic report compiled by an authentic source in Washington, D. C. which stated in effect that barring war, the economic outlook is today better and more healthy than at any time in the past decade. It went on to state that an enormous gain has been effected in that virtually all elements now admit that business alone and not the Government can achieve national well-being. This means that venturesome men and hesitant established business may again lift up their eyes.

The eyes of the world are on California. The Pacific era is at hand. With an ample, dependable, controlled water supply, with an abundance of hydro-electric power, with an ever-increasing traveling public, daily discovering our manifold advantages, with the Government returning to those sound economic fundamentals which made America great, population and industry are again on the march.

Lift up your eyes. Look about you. See what it means to double again our growth and development in ten years as we did every ten years from 1900 to 1930.

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HOLLYWOOD DIVISION OF THE LOS ANGELES REALTY BOARD

HOLLYWOOD CHAMBER OF COMMERCE

April 11, 1939

Mr. Chairman, and members of the Hollywood Division of the Los Angeles Realty Board:

Speaking to this outstanding and representative group of realtors on the subject of "Selling Southern California" presents a difficult problem.

You know too much about my subject!!

A speaker is supposed to bring his audience information they want or need - or present known facts with a new emphasis.

I realize that you gentlemen - perhaps more than any other group in this Golden State of ours - know all the facts. You are aware of the manifold attractions of climate, scenery, natural resources, agricultural and industrial opportunities as well as the educational and cultural advantages so rapidly developing here.

You are aware that Hollywood itself with its glamourous appeal broadcast to the entire world by motion pictures and radio has turned the eyes of the world toward California. You know that our fresh fruits and vegetables displayed on corner stands throughout the nation and Canada and our canned products sold by grocers of many lands have given us publicity beyond the power of money to buy.

Undoubtedly you are familiar with the interesting facts compiled by Don Thomas of the All-Year Club of Southern California -

That last year tourists spent $194,000,000 here - our second largest individual source of new community income.

That over a period of years 10% of the visitors return to locate permanently.

That 85% of homes built for owner-occupancy are built by former tourists.

That two out of every five people moving to the eleven western states settled in Los Angeles County.

That in the past two years 22 nationally known manufacturers located plants in Los Angeles County and 26 plants made expansions.

And I know you realize that the Los Angeles metropolitan area has increased from 30,000 to about 2½ millions in the short space of fifty years.

And that California has more citizens from other states than any other state in the Union - and at the same time has the smallest percentage of her native born living in other states. This shows that you realtors are on the job in selling Southern California, and it also shows that we have what it takes to hold our own native born.

But I didn't come here to repeat facts you already know.

My purpose is to place emphasis on the one factor lacking in Nature's bounteous provision for man in this ideal spot and to bring you a new realization of the ingenuity and courage with which we have faced and conquered this lack - lack of water, that vital necessity for human existence.

I would emphasize the realization that all the foregoing facts are contingent upon our imported water supply - that great cities, industries, commerce and everything we have built here are predicated upon the dependability of water available - that thinking people do not buy land in desert places, but they buy an interest in the water supply. The artery feeding all our urban activities and supporting our economic life has been that little line of steel and concrete that twists and winds across the Antelope Valley into the High Sierras.

The story of the growth of the City of Los Angeles from a cluster of adobe huts, a little over 150 years ago, to one of the large cities in the world today can be told in terms of water. From the founding of the City to the year 1862, the primary use to which the land was put was grazing, and 40¢ an acre was a good price. The great drought of that year practically put an end to the industry. Cattle herds had grown beyond the water supply of the territory. Next came the great grain ranches. Some of you here today no doubt recall the time when the San Fernando Valley and elsewhere on the coastal plain were great seas of waving grain. This period ended in the 80's with the introduction of efficient pumping machinery and its use in inrrigation. With it came the great citrus industry which without a constant supply of water would vanish in a comparatively few years. Wild grasses and chaparral would take possession of the land again and it would revert to desert.

It is interesting to speculate what would have been the condition in Southern California had the Owens Valley Aqueduct never been built. When "Chief Mulholland" disclosed his vision of bringing water from the High Sierras there were many who scoffed and said that Los Angeles would never need it. Plans had been proposed for bringing water from the San Gabriel Valley. The city undoubtedly could have gotten a supply from that source which would have filled the immediate need. It would have been, however, at the expense of the balance of the Coastal Plain. Had the scheme been carried out, where you see beautiful groves and homes and communities in the San Gabriel Valley, here would today have been a great expanse of worthless desert waste. Fortunately for the people of Southern California, the more difficult, the sounder, and the far-seeing plan of building the Aqueduct was adopted.

With the building of the Colorado River Aqueduct I believe we have again followed the sound and far-seeing plan. Many years of contact with the water supply of Southern California, first in connection with my own investments, and then as a member of the water and power commission of the City of Los Angeles and later as Chairman of the Board of Directors of The Metropolitan Water District, I continually find many of our people do not grasp tje fact that they are in reality living in a desert environment. They think of their real estate values in terms of land and people, rather than in terms of water. When you stop to think of it, Southern California is only an artificial oasis in the desert. It is probably the only community in the world supporting millions of people that is located over 300 miles from an important river or a large body of fresh water. Our average annual rainfall of 15 inches compares with from two to four times this amount in the other major centers of population in the United States, and that is only part of the story. Our meager rainfall comes inthree or four months and the balance of the year is dry. Large reservoir sites do not exist and if they did they would be unusable because of the high rate of evaporation. And still further, our 15 inches average rainfall is made up of years running from little more than nothing to as high as 36 inches. Therefore, the average means practically nothing when four or five years in succession it has been much less. It is the years of minimum rainfall that measure our security. We have been living off waters stored for countless ages in our underground basins. It is like the individual living off his bank account without any income - sooner or later he goes broke.

It was this condition that brought about the construction of the Colorado River Aqueduct. Where the wealth and security of millions of people are involved, there can be no gambling with their water supply. It must be as certain as the rising of the sun. This next year the Colorado River Aqueduct will go into operation. This great project which was started 15 years ago is now nearing completion. That little stream of water from the High Sierras will soon be relieved of its sole responsibility and will have the assistance of another aqueduct 300 miles long, bringing the melted snows of the Rocky Mountains to Southern California. With that water will come a new period of growth for Southern California. No longer will business and industry say that they cannot afford to take the chance on Southern California because she has not sufficient water. For years the engineers sent out by eastern industrial concerns to investigate the feasibility of locating plants in Southern California have reported to their principals that Southern California has a precarious water supply and have pointed out that this area has not experienced a major drought since 1900 as severe as those recorded prior to that time. You and I know of industries that have demanded a guaranteed water supply before they would accept a site for a factory. This hesitancy has now disappeared. Industries seeking to locate in Southern California are eliminating the question of water supply and confining themselves entirely to economic considerations. Our realty values and our investments are at last about to be placed on a really sound and secure foundation. If not a drop of water were used out of the Colorado River Aqueduct, it is worth every dollar it cost in terms of insurance to existing values and to the safety it guarantees to the inevitable expansion of population and industry. You have your insurance and in addition a sound investment which will pay handsome returns in the years to come.

In addition, you have had the benefits of this construction beginning in 1932 during the worst depression this country has ever experienced. 14,000 men have been given employment on this project and I venture to say that there is probably not an individual or business concern in Southern California that has not directly benefited by the millions of dollars of expenditures for materials and supplies which went into the construction.

And this project was not cutting weeds and raking leaves or piling dirt; it was an honest dollar's worth for every dollar spent and will remain a community asset for all times to come.

Like all great, forward looking projects, built as an insurance against drought and to supply future needs, the Colorado River Aqueduct cannot now be fully appreciated. As always in the past, population and industry will flow to those areas having this assured water supply, which is truly the life-blood of all future development.

Conclusion

The attractions of Southern California enjoy world-wide publicity. The citizens of Southern California have had the vision to supply its one lack and insure its future stability. One million visitors each year are "selling" Southern California to their friends back home. Gentlemen, it looks like all we have to do is meet them and show them where to sign on the dotted line.

* * * * *

Dinner Meeting of the

SAVINGS AND LOAN CLUB OF SOUTHERN CALIFORNIA

April 13, 1939

I feel particularly happy and comfortable in this group - for by the nature of the business you represent, I am sure you belong to that good old American school of thought in which I was reared. That school taught that thrifty living, consistent saving and carefully secured loans are the best way to personal, national and world security.

The American spirit of self-dependence which has built the greatest nation on earth in a century and a half was rooted in the belief that there should be no special privileges for classes or individuals. Just as our founders discarded the Divine right of Royalty to inherit power and wealth created by the masses, so I believe today they would discard the right of indigents to inherit a security which hard-working, self-denying men and women have made possible by their energy and thrift.

Of course, the orphaned young, the physically and mentally afflicted and the infirm aged should be provided with comfort and opportunity by the society of which they are, through the weaknesses of society, inevitably a part.

Beyond those actually afflicted by circumstances beyond their control history and psychology prove that relief from personal and social responsibility is an injustice rather than a help. It is a dirge to ambition, a deathknell to the development of genius and initiative in business and in the arts - a subjugation of man's primal urge for self-preservation which is the basis of all progress - and finally, it is the doom of that self-respect which has lifted the human race from the limitations of the jungle to his present mastery of the physical forces of a might, unchangeable nature.

I make bold to say these things here, because I know of no other ideals upon which a savings and loan business could be established or maintained.

At this crucial hour of world history, when the immature spiritual ideals of a half-selfish world are struggling with the age-old primitive forces of the physical and wholly selfish man, we wonder whether this boasted mastery

of science, with all its potential power will further our progress or spell our destruction. Like all power in whatever form, humanor mechanical, modern man's knowledge can be used to build or to make chaos. The purpose for which we use our present mastery of science will determine its ultimate value to humanity.

Here in Southern California we should feel a just pride in that we have made use of modern engineering genius and mechanical invention to build the world's greatest water system - to bring the waters of the Colorado over three hundred miles of desert and mountain through an Aqueduct constructed for the worthy purpose of supplying to this beautiful, fruitful coastal plain the one necessity it lacks - water. The seemingly impossible has been accomplished. Water has been l lifted through five pumping plants to a height of 1645 feet and is even now on its way to fill the great reservoirs which will supply the needs of ten million people. Yes, the late summer of this year will see the completion of theColorado River Aqueduct, insuring stability to the growth of this favored land, and removing through time to come that dread specter of drought which forever haunts these semi-desert places. And whatever happens to our present civilization in the future, that aqueduct will stand as a lasting monument to the mastery of science possessed by twentieth century man.

But let us leave speculations and predictions to the radio and newspapers. What interests us most is the immediate business and prospects of our own beloved Southern California. It behooves us to dtudy and work for its best present and future security - and to pray that the rest of the world - each part minding well its own business - may be able to make its best contribution to world security.

We in Southern California are generally well-aware of our superior year-around climate, our beautiful and varied scenery, our abundant supply of healthful foods, our rich mineral and oil deposits and of the economic and cultural wealth which these resources have concentrated here.

Our citizens have ever been alert to their opportunities - energetic and resourceful in making the most of them. Some facts recently compiled by Don Thomas of the All-Year Club show the splendid results of our concentrated efforts. Here are a few of them.

Last year the tourists spent $194,000,000 here - our second largest individual source of new community income.

Over a period of years 10% of the visitors return to locate permanently.

85% of homes built for owner-occupancy are built by former tourists.

Two out of every five people moving to the eleven western states settled in Los Angeles County.

In the past two years 22 nationally known manufacturers located plants in Los Angeles County and 26 plants made expansions.

The Los Angeles metropolitan area has increased from 30,000 to about 2½ millions in the short space of fifty years.

California has more citizens from other states than any other state in the Union - and at the same time has the smallest percentage of her native born living in other states. This shows that we have the attractions people throughout the nation are seeking, and it also shows that we have what it takes to hold our own native born.

All of these pleasant facts we hear and absorb with a feeling of renewed security, with little realization that all our gains - in fact our very existence in Southern California, have been made possible by the little pools of water accumulated in our underground gravel beds through the ages - augmented by that hollow cord of steel and concrete called the Los Angeles Aqueduct flung across the desert to bring to us the melting snows of the High Sierras.

Damocles at the king's banquet, sitting under a sword suspended by a single hair might as well have felt secure as we who have entertained dreams of the continued growth of Southern California without first securing a more adequate and dependable water supply well in advance of our present needs. For Southern California is, in reality, only an artificial oasis in the desert. It is probably the only community in the world supporting a million people that is located more than three hundred miles from an important river or a large body of fresh water. Yes, this incomparable land we love so much has existed only by sufference of the desert. How close the margin has been and how narrow our margin of victory, only those closely related and concerned with water problems can appreciate.

With the completion of the Colorado River Aqueduct this year I think we can safely say that the battle is over and the desert has been pushed for all times beyond the mountains. From now on we can concentrate all of our thoughts and energies to the building up and perfecting of the great resources and assets with which nature has endowed us. The sword that has hung over our heads will henceforth be suspended, not by a single cord, but by two stout cords. We will have two aqueducts drawing water from widely separated independent water sheds in entirely different climatic zones. Our great Los Angeles Aqueduct, marvelous and indispensable as it has been, is unfortunately located in the coastal climatic belt and suffered from the same dry cycle as our local sources. The Colorado River Aqueduct will draw water from 240,000 square miles of watershed, extending clear up to the roof of the continent in Colorado and Wyoming. If this country were ever plunged into modern warfare, every single one of our citizens would become acutely aware of the importance of our two great aqueducts. Giant enemy planes of the future would unquestionably have these two aqueducts as their main objectives. The possibility that both of them would be bombed out of service at the same time is a remote contingency. It may be interesting to know that during the construction of the Colorado River Aqueduct army experts studied the location of the Aqueduct, with its many tunnels and pumping plants, from the standpoint of national defense, and from all I have been able to learn were well satisfied with the location and the design.

Perhaps you are asking in your minds, "What basis have we for the assumption that Southern California will continue to grow in the future as it has in the past?" May I answer with some personal observations and facts. Many of you here have been over the same trail that I have. Some of you were undoubtedly already here when I came to Southern California about forty years ago. Some of you probably, as I did, came here for reasons of health and have remained to devote your enthusiasms to your adopted land. Since coming to California in the early part of the century I have studied as intently as it was possible for me to do the question of the growth and development of Southern California. I have made frequent trips throughout the East to study the attitude of the balance of the nation toward Southern California, particularly with regard to the migration of people and industry to this area, and the markets for California products in the East. I have traveled throughout Europe to learn what the Old World has to teach us in the way of successful living and to observe the form their civilization has taken after thousands of years of experimentation. These studies and observations have left me with the conclusion that no place in the world

today has the attraction for a steady population increase possessed by Southern California. I could cite numerous statistics in support of this contention taken from the Federal census such as quoted above.

This movement westward evidenced by the unprecedented growth of this community is not a thing of chance; it is the culmination of a general trend. During all the years of which we have authentic history there has been a flow of population from East to West. The population of modern Europe came from Asia. The growth of this hemisphere has come about since Columbus crossed the Atlantic in 1492 and has been from the East coast to the West coast. Whether there is any scientific reason for this flow of population following the course of the sun, I do not know. The fact remains, however, that here along the Pacific coast the migration of people is looking across the broad expanse of the Pacific to the place from which they started. With no lands further West, the flow has been dammed up against the waters of the Pacific and has started a great process of concentration. I do not for a minute believe that this movement of people around the earth would have any significance were it not for the fact that we have everything here which the peoples of the earth have sought in all their movements down through the ages. We have a food supply of the highest quality and of infinite variety throughout the year. We have the life-giving all-year sunshine under climatic conditions which make possible vigorous living without the enervating effects of the tropics. Our oil, our gas, our products of our mines in infinite variety, chemical, and agricultural raw materials of almost every description, our products of the forests and the seas, a great reserve of competent labor and growing markets for finished products, make inevitable the industrial growth and expansion which statistics reveal is already taking place. From the standpoint of recreation, which people are demanding more and more, we have every variety to be found anywhere in the world. From the seacoast to the snowcapped mountains there is a gradual transition which at some point has an appeal for every individual under the sun. The cultural foundation on which this great new civilization will be founded is manifest everywhere in Southern California. The artistry of the studios, the scientific accomplishments of Cal-Tech, the growing international recognition of musical and literary accomplishment are all manifest of the trend.

The missing link of water is now being supplied and it only remains for us to take advantage of our opportunities and develop them to the fullest. Some of the pessimists say that this all may have been very true in the past,

but population throughout the world is becoming static, migration has stopped, and there is no excess to flow to Southern California. These facts are well established. Nevertheless, Southern California will grow, probably at the expense of the balance of the nation. While population in eastern centers remains constant or actually decreases, Southern California will continue to grow as it has throughout the depression. In fact, figures are available to show that many cities in the east are actually losing population, while we are growing. An important stimulus to this trend is the modern development of old-age pension programs. As people reach the retirement age the attractions of Southern California become irresistible. We must recognize the fact that many people in the future will retire on comparatively small monthly incomes. For this situation California has an ideal solution which is clearly demonstrated in the San Fernando Valley and on the coastal plain of Los Angeles County. This type of development has been particularly interesting to me and I observed it intimately in the age-old centers of Europe. The solution is the garden acre home where people can supplement their cash income by producing a large part of the family requirements. The shorter work day and week, which is being made possible by modern machinery, gives ample time for employees of all types to engage in the healthful practice of producing a large part of their food requirements. In the future you will see this type of development brought to its highest state of perfection in Southern California.

With the influx of people bringing new wealth and culture, the beautification of our cities along modern lines will inevitably follow. The time will come when this entire coastal plain will be one well-organized, artistically beautiful workshop and playground where human living can conceivably approach the ideal.

Through our motion pictures and over the radio, the glamour of Southern California is being broadcast to the world. Our fresh fruits and vegetables on the corner stands throughout the nation and canned foods on the shelves of every grocery store proclaim the richness of our land. We have had the faith and courage to remove the one lack in Nature's bounteous provision by building the greatest water supply system in the world. The Pacific Era is upon us. We are prepared for it. Surely a great destiny awaits us.

* * * * *

Meeting of the

LOS ANGELES CHAMBER OF COMMERCE

April 24, 1939

Chairman Jensen, and members of the Water and Power Resources Committee:

A few days ago George Cecil called me and asked me to discuss with you the policies of The Metropolitan Water District and its program for the future. This is a large and somewhat complex subject. Consequently, in order to limit my remarks to a reasonable time and confine them to some of the important phases of the subject, I have reduced them to writing.

Last December 29th was the tenth anniversary of the first meeting of the Board of Directors of The Metropolitan Water District of Southern California. Since that historical event we have come a long way and overcome a great many obstacles. The first great hurdle was the $220,000,000 bond issue, which was followed by almost a year of validating litigation. The next hurdle was to finance such a tremendous project at the very lowest point of the greatest depression the country has ever known. This was successfully initiated by a loan of $40,000,000 from the Reconstruction Finance Corporation, created by the Hoover administration and which had just been authorized to make loans to self-liquidating projects. In the formulation of the legislation permitting such loans, the representatives of the District can claim an important part. Then came the period of intensive construction which culminated in the holing through of the San Jacinto Tunnel.

After closely observing the results of the years of construction, I am firmly convinced that the policies we pursued in this regard were correct and thoroughly sound. Some of our Board members were of the opinion that all of the work should be contracted. Others believed it should all be done by force account. By employing both methods we created competition and rivalry which contributed greatly to the excellent progress, low cost, and high quality of workmanship for which the project has achieved a reputation.

I have briefly given you the background before which the District stands today. It is largely a record of a struggle with physical and technical problems. It was chiefly concerned with plans and specifications, with thousands of men doing their jobs, with feet of tunnel excavated in 24 hours, with cubic yards of concrete poured, and the like. These problems are behind us.

During the fall of this year the initial development of the project will be completee except for some minor features of construction. We are now making plans for a celebration the latter part of September or the first part of October of this year in keeping with the arrival of Colorado River water in Southern California. This should be a real celebration in the old Southern California tradition in which every element of the community participates with unrestrained enthusiasm. Since the arrival of the water from the Owens Valley in 1913, there has not been an event of equal importance in the destiny of Southern California. When within the next few months we lay the plans for this celebration before you, I know we can be assured of your full cooperation.

With the physical completion of the Aqueduct and Colorado River water pouring into our economic life-stream, new and in many ways more difficult problems confront us. They deal with the intricate economic, psychological, and political factors involved in putting the project on a self-liquidating basis at the earliest possible date. We are in the position of the business man who has completed his factory and is about to start manufacturing and selling his product. He has solved the problems involving factory and machinery and is about to establish his marketing organization and undertake the sale of his product.

We are proceeding carefully with the formulation of the policies which will chart the District's future course. Back in 1931, before the bonds were sold, the Board of Directors of the District established a few fundamental principles. One of the first of these was that the area included within the District should not require ultimately more water than could be supplied by the Aqueduct together with the safe yield from existing sources. Roughly, the territory for which the Aqueduct was ultimately planned was defined as including the coastal plain area in Los Angeles, San Bernardino, Riverside, and Orange Counties lying between the mountains and the sea. Several modifications of this area have been considered at one time or another. A great interest in Colorado River water has been manifested by a large area in eastern Ventura County comprising the Simi Valley. This is a fertile and rich farming district with great potentialities and very inadequately supplied with water. It is naturally tributary to the Los Angeles metropolitan area and is a part of our economic structure. The construction of the Hueneme Harbor indicates the aggressive and progressive spirit of the people. I feel that eventually they will work out a sound method of participating in The Metropolitan Water District.

I want to call your attention to several very important implications involved in this policy of the District of balancing the area to be admitted against the capacity of the Aqueduct. You will note that this means that even after Colorado River water arrives there is still going to be more thirsty land in Southern California than water to supply the ultimate demand. It means further that for every area drinking from the Aqueduct some other area must forever be excluded. It is important that these facts be borne in mind because so many people, faced with a temporary abundance, become careless and wasteful,thinking the condition permanent. It is like the oil and gas which have been so flagrantly wasted in the past but which will some day be greatly missed. The future will not deal gently with those who failed to have the foresight and the vision to take advantage of priceless opportunity while it was available.

Another area considered outside of the originally defined District has been San Diego City and the portions of San Diego County lying west of the mountains. At one time they seemed to be intensely interested in joining with the District but have not followed the matter up since their consulting engineers rendered a report adverse to joining with the District. In a certain sense I personally do not feel that the San Diego area is naturally a part of the Aqueduct project and should not be considered except under conditions favorable to the District. An important factor in this situation is that San Diego has a right in its own name to 155 second feet of Colorado River water and since the Aqueduce can undoubtedly be made to carry this amount in addition to its designed capacity, San Diego's joining the District would not cause to be reduced the amount of Colorado River water available to the local area. But on the other hand we must recognize the fact that San Diego is no not a part of the Los Angeles metropolitan district,and is, in fact, a competitive metropolitan center. Any development which takes place in San Diego County would be largely at the expense of the local area. While this is essentially a selfish point of view, I feel that we should conserve the benefits of the Colorado River Aqueduct to our local metropolitan communities and our people who had the vision and the courage to assume such an enormous financial obligation.

I have endeavored to indicate to you the District's annexation policy in its broadest sense. In ints more particular aspects, there are a number of important considerations. At one time or another we have had inquiries towards annexation from practically every section of the coastal plain.

They have varied in size from small individual towns to large agricultural districts of 50,000 acres or more in extent. The general policy of the District in treating with applicants for annexation is to give favorable consideration only to areas of sufficient size and water requirements to justify as economically feasible the delivery of Aqueduct water. Furthermore, areas should preferably be so located as to control the entire production of water from local underground water basins affected.

In order to deal with the problem intelligently, the engineers have been attempting to outline and define units which the District would regard as qualifying for membership. Fourteen such units have been so far tentatively defined. I might point out in this connection that annexation to the District can take place either by joining to one of the existing member cities, or by setting up an individual unit which would independently seek to qualify for membership. A consideration having an important bearing on the number of units to be annexed is the fact that each such unit has a representative on our Board. Therefore, if the units annexed are small, the size of the Board of Directors may eventually become unwieldy and impractical from the standpoint of efficient functioning. The prinicple may be concisely stated by saying that the new areas to be annexed to the District should be as few and as large as possible.

Another principle relating to annexations which the District has accepted is that territory along the coast should be annexed before territory higher up the drainage slope. The reason for this is obvious. If the upper sections were admitted first the District would probably not be able to prevent lower territory from permanently benefiting by Colorado River water replenishing the underground basins. In other words, it is our policy and intention to control, as far as humanly possible, for the benefit of the District, the use of Aqueduct water. As old Judge Hutton used to say, we don't want any riders on our bumper - get inside and have a seat.

To digress for a moment, I would like to emphasize my personal slant with regard to the use of Colorado River water and the expansion of theDistrict. I am a strong believer that the best way to accomplish something successfully is to follow a method and procedure that has previously been demonstrated to be sound and practical. Wehn you depart

from the narrow path of proved human experience, you are apt to end up in a swamp or jungle from which there is no going ahead or back.

One of the most successful public undertakings ever achieved was Bill Mulholland's aqueduct to the High Sierras. Analysis will show that what made it succeed was Bill's uncanny ability to apply sound and fundamentally right basic principles. He believed that the first cost should be kept to the absolute minimum consistent with sound engineering and construction. He believed that when the City had brought in the water to the local area it had fulfilled its obligation and those who directly benefitted from the project should pick up the burden at that point.

The success of his policy is demonstrated in the San Fernando Valley. There one-fourth of the water supply was made available to the Valley for agricultural purposes. On that one-fourth of the Aqueduct's capacity has grown the population of the San Fernando Valley, including the towns of Burbank and Glendale. In other words, 150,000 acres of land were changed from dry farming of grains where two crops in five were lost because of drought to the highest type business, residential and rural developments. If we apply that same ratio of one-fourth to the Colorado River Aqueduct, a similar development of 600,000 additional acres on the coastal plain would be possible. There are approximately one million additional acres needing water in the area I defined to you previously as constituting the potential District. This emphasizes what I said before - the Aqueduct supply is limited. The wider we spread it the thinner it gets.

On this question of annexation as affected by the District's policies there are several observations which can be made. The District has an aggressive, capable committee dealing almost exclusively with these questions of annexation. Engineering studies have been made of the water resources and requirements of every part of the coastal plain. The District has indicated that untreated Colorado River water will be made available at approximately average local production cost of $8.00 per acre foot and that an additional charge of about $7.00 an acre foot will cover the cost of water softening.

Main distribution lines have been laid out and built and reservoirs provided to take care of the potential

demand in as flexible a manner as possible. Innumerable personal contacts and much information and data has been furnished to everyone interested. In doing all of these things we appreciate fully that we are only laying the foundation for annexation. The actual annexations will be dictated by necessity and not by much of anything that the District might do. When the years get dry enough and the local supplies get low enough, we won't be able to keep them out of the District with soldiers and machine guns. When it gets dry enough, and it will sooner or later, they will be climbing over each others backs to get into the District and not much that we can do in the meantime will have an appreciable effect. This doesn't mean that we are letting up in the least in our efforts to broaden the District's financial base, but is only stating a fact as to cussed human nature - don't do anything until you have to.

There are several other possible uses of Colorado River water which, while not important in a revenue sense, are of considerable interest. Under the powers of its Act, the District has authority to sell water to agencies of the federal and state governments. Several inquiries from such sources have come in, including March Field, The Chino prison site, and the California Polytechnic School. Since such consumers will probably not be within the District, the water charge will be computed on the basis of their assuming a proportionate part of all costs.

Many inquiries for water have come to the District from areas in the desert east of Banning and adjacent to the Aqueduct line. No encouragement whatever has been given to such inquiries because they come from outside our defined ultimate area. However, within the last year a new type of desert development has been proposed. Dr. Clements of the Chamber, as a great desert lover, has been one of its principal proponents. Under a law passed by the 75th Congress, the Secretary of the Interior is empowered to sell or lease plots up to five acres from the federal domain. Under this Act the proposal has been made that desert communities be established under rigid control primarily for recreational and health purposes. Inquiries have been received by the District as to whether such units located adjacent to the Aqueduct would be provided with water. The Board of Directors of the District is now considering the proposal. Personally, I feel that the proposal has considerable merit. The developing of such communities under rigid federal control would prevent the creation of disreputable and unsightly shack towns around every desert waterhole.

The amount of water which the District would make available for strictly domestic use without any water for agricultural or beautification purposes would be infinitesimal in proportion to the benefits which might accrue to our citizens. Such projects, of course, would be entirely non-profit and would be carried out under strict governmental regulations. The District would not serve individual consumers, but wholesale to each such communith at a price high enough to prevent waste or unnecessary use.

From now on the fundamental problem of the District, stated in its simplest terms, is this: How can the project be made self-liquidating at the earliest possible date? Everything we do must revolve around that fundamental requirement. The coming dry cycle will contribute materially to its solution. The growth of population in Southern California is another important factor, which I believe is taking care of itself very satisfactorily. The indications are that in spite of depression, uncertainty and what not, the flow of people into Southern California is continuous and unabating.

New industries are coming and old ones are expanding. The stage is being set for our next great wave of development when present economic undertainties are definitely eliminated. Many economic studies have been made on the question of water rates as related to income and the encouragement of the use of water. Present indications are that a rate of $8.00 per acre foot for untreated water will probably result in the greatest possible revenue, and the least tax cost during the early years of operation.

A treatment plant is being built on the premise that it will encourage the municipal and domestic consumption of water. This remains to be demonstrated. I personally am inclined to the view that it is more essential to conserve our funds and reduce the first cost as much as possible than it is to provide refinements that are desirable but that are not absolutely necessary. In my opinion the District's primary market for water during the first years of operation is going to be the agricultural demand for untreated water. During the early years of operation there will have to be a distribution of the cost between water rates and taxation. By increasing the total water revenue, the tax levy can be reduced. Here again this calculation depends on such intangibles as rainfall, population growth and the rate of expansion of the District. I firmly believe that the best interest of our communities and citizens lies in keeping the water rate low. The resulting growth of the District and the demands on the Aqueduct will eventually reduce the tax cost to the vanishing point.

* * * * *

Presentation of a Memento to

THE HONORABLE JESSE H. JONES

August 11, 1939

Mr. Toastmaster, Ladies and Gentlemen:

For the past ten years, the foremost problem in America has been to find useful employment for millions of our citizens who were victims of an economic chaos, unprecedented in our history.

Our honor guest doday, as Chairman of the Reconstruction Finance Corporation during this period, has made possible honest, creative work for hundreds of thousands of men on constructive, self-liquidating projects which will stand as monuments to his wisdom and ability in the administration of public funds. Funds secured by interest-bearing bonds which are an asset to our national treasury.

One of the largest of the projects financed by loans from the Reconstruction Finance Corporation is our Colorado River Aqueduct.

During the construction of this greatest water supply system in the World, we have given employment directly to a total of 35,000 men. And in the manufacture of about 70,000 carloads of material, equipment and supplies, brought from all parts of this Nation, we have furnished employment to tens of thousands of other workers.

The water brought to the coastal plain by this Aqueduct - now nearly completed, will make possible the continuing development of our cities, creating additional employment and opportunity for generations to come.

Mr. Jones, in recognition of your public service as a great administrator and practical statesman, the Board of Directors of The Metropolitan Water District of Southern California wish to present this token of appreciation -

A vase - to hold water - symbolic of that stream which we will bring to the Golden Cities through our great Aqueduct; and flowers - flowers symbolic of the beauty and productivity made possible to Southern California by that Aqueduct.

The vase bears this inscription -

HONORABLE JESSE H. JONES
GREAT ADMINISTRATOR AND PRACTICAL STATESMAN

WHOSE LASTING PUBLIC SERVICE, NATIONWIDE AND
TO CALIFORNIA, IS GRATEFULLY APPRECIATED.
PRESENTED BY
BOARD OF DIRECTORS OF
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA
AUGUST 11, 1939
LOS ANGELES, CALIFORNIA

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THE FUTURE OF SOUTHERN CALIFORNIA IN THE LIGHT OF OBSERVATIONS OF EASTERN METROPOLITAN CITIES

June 30, 1939

It is always good to come home. But after a complete tour of these United States - relaxing in the langourous atmosphere of tropical Florida, visiting the high spots of the Eastern Seaboard, motoring through historic New England, taking in the Fairs at New York and San Francisco, and points between - I am more convinced than ever before that the most fortunate man in America is the man who comes home to Southern California.

This statement is not prompted by the natural way one feels for one's home - nor by an over-developed sense of loyalty - nor yet by a desire to uphold our reputation as boosters. Rather, it is made in calm deliberation after careful observation of ALL conditions wherever I have traveled - observations which have made me realize how many sections of our country are outmoded in architecture and transportation facilities - how many of our great cities are top-heavy with intricate devices in the attempt to adapt the conditions of the slow and simple village blacksmith days to our fast and complicated motor age - and how, of all the metropolitan areas in this great land, that of Los Angeles is best designed to meet the requirements of that fabulous World of Tomorrow so ably and glamourously depicted at the New York World's Fair.

We are in an era of rapid and drastic change - of inventions so numerous and diverse that, for one of my conservative years and ideas, to see them all combined and demonstrated as at our World's Fair, is like the awakening of Rip Van Winkle after his twenty years' sleep in those peaceful hills beside the quiet-flowing Hudson.

One exhibit in particular has "stolen the show" in New York. It is that of General Motors in which one tours across the United States of 1960 - complete in diorama and seen from a moving platform while explanations of each scene come through an individual speaker beside your comfortable chair.

In this vivid portrayal of the country twenty years hence, rapid transportation on fool-proof highways is the point of emphasis. No longer are cities crowded or traffic congested. The City of 1960 is spread out over a large area - with parks and trees, playgrounds and great amusement centers with ample parking space for cars that travel at 100 miles per hour over divided, many-laned highways with no left-hand turns or grade crossings. These arterial highways are fed by an inflow from side roads so designed as not to slow down cars on the main thoroughfare. Likewise, motor cars leave the

arterial highway without interference with the main line of traffic. So perfectly has this ideal system of motor transportation been worked out to combine speed and safety, that the suburban home of tomorrow may enjoy every convenience of the city without that dreadful spectre of the "traffic jam" which today wears our nerves and threatens our lives.

"But," you may say, "that is an artist's portrayal of an engineer's dream." True, that is what I saw in actuality. And in my knowledge of the physical limitations of many of our leading cities today, I realized how impossible it would be for them to realize that dream. But, this is the point I want to make clear. It is that our own Los Angeles, spread out as it is over 450 square miles, and the contiguous cities of this great metropolitan area with over 600,000 adjoining undeveloped acres, are made to order for the development of a highway system which will fit us perfectly into that ideal "World of Tomorrow."

It is that "World of Tomorrow" for which in part we have built the Colorado River Aqueduct - that community of the future here in Southern California of millions of people who may live in God's sunshine on Nature's fresh foods amid serene surroundings with close proximity to all of the art, culture, and commercial advantages of modern civilization.

On my recent visit to New York for the purpose of getting a first-hand picture of transportation facilities, I hired an automobile and drove over a thousand miles, taking in the main highways in and about New York and Boston. It was most interesting to see the splendid way these two cities have worked out their main arterial highways to avoid congestion and facilitate speed and safety. New York particularly has done a magnificent job within the limitations of its site in developing a system of parkways leading to and from principal suburbs and connecting these through the Henry Hudson and East River Drives with the very heart of the City. The Triborough Bridge connecting Queens, the Bronx and Manhattan by many-laned boulevards over intricate winding bridges is a masterpiece of engineering. This ingenious highway system, augmented by subways, elevated, ferries and boats makes possible the commutation of millions who go daily from Westchester, Long Island and Jersey to office and factory in New York. But one trip, by any of these ways of transportation on a hot summer day, will convince the thoughtful observer that the limit of population concentration in this region has been reached. To pass miles of apartment houses with pale women and fragile children leaning out of windows

to get a breath of air - air so full of smoke and dust that it envelopes the city in a cloud visible for many miles distant as one approaches New York from the open sea; to listen to the constant rumble of traffic that jars nerves until the finer senses are dulled; to travel block after block with never a sprig of green to please the eye - all this is bound to impress one with the fact that the alert youth, with the will and ability to better his conditions, will never remain in such surroundings. His grandfather sighed wistfully as he heard of the spacious green acres of fine estates on the Hudson - but they were only for the wealthy!

The youth today knows it is possible to have a modern bungalow with a garden acre where life can be lived fully and richly with moderate means, and he knows he does not have to endure the confinement of the city to enjoy the advantages his grandfather sought here. Modern devices have given to the suburban, and even the rural home, light, automatic heat and all the electrical gadgets which, a few years ago, made the apartment so desirable. The radio has abolished that loneliness and isolation once the bug-a-boo of the country. The automobile has given the country boy that sense of freedom and speed he once sought in the city. And the movie has carried to every community center the glamor which once belonged to Broadway alone. All these innovations have completely changed our American mode of life. The conditions which compelled great masses of people to huddle together in congested areas in order to put themselves in contact with the rest of the world no longer exist. There is today no sane reason for such concentration of population as built New York and similar cities.

Furthermore, the youth with initiative and ability knows from the education he was compelled to take and from the newspapers he peddles on busy streets, that he need not be snowbound all winter - nor swelter in a crowded tenement all summer. He has heard a lot about this magic land of California with its friendly year-around climate and he is going to see and know it for himself. He belongs to the world of tomorrow and he will recognize Southern California as the best place in which to make that world come true.

It is up to us to clean up the slums we have (and they are so small compared with those in other cities of our size), convert them into parks to beautify our city and into auto parking spaces which will maintain the values of our best downtown districts. It is up to us to work out here in Southern California our traffic problems to include not only our present cities, but to make easily and safely accessible

those 600,000 acres which can be developed with the additional supply of water which the Colorado River Aqueduct will soon deliver. With abundant water and an A-1 system of highways, we will invite the building of workmen's homes on garden acres where production for use is practical, and of gentlemen's estates where families may live as in the English countryside or on the Hudson, with easy access to the city. Naturally, we must preserve those metropolitan values created by the foresight and patience of our leaders. This can best be done by an immediate and far-sighted planning of our traffic and water systems - with full realization of the futility of copying plans which were made necessary by such congested areas as about Manhattan.

It is absolutely essential that we of the metropolitan area of Southern California realize that we are in a class by ourselves. No other area of like population lends itself so admirably to ultra-modern development.

Unprecedented vision and indomitable courage built our present aqueduct and made possible our tremendous growth. We are exemplifying that same vision and courage in building the Colorado River Aqueduct which will again remove our limitations.

The same vision, used in the distribution of Colorado River water and in the solution of our traffic problems, will weave our entire coastal plain into a single population unit which may well be the ideal of "The World of Tomorrow."

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"The Garden Home and Industrial Stabilization
in Southern California"

THE SOCIAL STUDIES REVIEW
September 6, 1939

Today on every hand we hear individuals gravely stating, "We are in the midst of a revolution." With much misgiving they point out the social, political, and economic changes which are taking place all over the world. The fact of the matter is that the current accelerated rate of change that we observe on every hand is not in any general sense a revolution. It is rather that we have suddenly become aware of the manifestations of an evolutionary process whose roots are deep in the past. Like the sprout from a seed that has been working up through the soil, we have not been aware of its presence until it breaks through into the sunlight.

Through all the ages, man, despite frequent setbacks and many excursions up blind alleys of social experimentation, has struggled to achieve a higher civilization - a civilization which would give him maximum comfort and security with a minimum of labor. At various times he has builded to great heights in art, science and culture, only to have his proud superstructure fall for lack of balance in its social and economic foundations.

Here in America, the seeds of civilization were sown in virgin soil. The planters were men of courage and vision who, wise to the failures of the past, knew that a lasting civilization could only flourish in an atmosphere of human freedom. The progress of this United States of America in its 163 years under the banner of liberty and equal opportunity is proof of the practical idealism of our founders.

The seeds of courage, energy, thrift and honesty planted with faith in this Garden of Liberty have yielded for us a harvest of plenty. Countless inventions which are the fruit of individual freedom of thought and action have burst upon us with amazing rapidity. We find difficulty in making necessary adjustments as the machine replaces old forms of human labor and produces a bounty we do not know how to distribute.

This sudden change - from long hours of physical toil for the necessities to the possibility of much leisure for all - has caused serious maladjustments for which every wild-eyed theorist prescribes a different cure.

It is fallacy to confuse our condition with that of the revolutionary countries of Europe. Their problem is to get space and food for over-crowded populations. Our problem is merely one of economic adjustment within our own borders - working out a system of distribution adequate to our productive power.

Wherever a disorder exists, it is necessary to go back to fundamentals for a solution. The relation between man and the soil, which gives him life-sustaining food, is basic in attempting to solve any serious social problem.

Primitive man, wresting the necessities of human existence from the earth about him, lacked the trappings of civilization we prize so highly. But by energy and courage he usually got enough to eat and enjoyed as much contentment as the searching soul of man achieves on this planet.

Highly civilized man, softened by the ease and comfort his environment offers, usually crowds into great cities, there to luxuriate in the best culture of his age. Practical knowledge of basic facts gives way to the search of ideals. Ideals without practical foundation are never realized. He becomes discontented. Energy and courage disappear. Degeneration. And another peak of civilization fades into oblivion.

Between these two extremes, there is a happy state in which man can enjoy the rich benefits of civilization and still keep close contact with the soil upon which he must always depend for life.

Here in Southern California we see thousands of families who have found this happy state.

Of special interest to us in the fast-moving age is the City of Tomorrow. In its broadest sense the building of this City is concerned with how and where people will live, work, play and move about. Naturally, we who live in Southern California think specifically of the Los Angeles metropolitan area comprising some 2,000 square miles and representing our rich coastal plain. Within a comparatively short span of years we have seen Los Angeles change from a rambling, over-grown village of less than100,000 persons into a diversified agricultural and commercial center, ranking fifth among the great cities of the nation. The reasons for this remarkable growth are only incidental in this article. Our great interest is in the future. In other words, where do we go from here?

Those who have thoroughly analyzed the fundamentals underying our unprecedented growth agree that the trend of population increase in Southern California will continue unabated. Statistics on the whole nation may show declining birth rates, but the growth of our favored section will continue notwithstanding. Two factors will have an important bearing on the continued shifting of population from states ease of the Rockies:

First, the very evident trend of decentralization in industry which can be clearly demonstrated by an analysis of the industries and branch plants locating in the Los Angeles metropolitan area within the last ten years; and

Second, an increasing number of people receiving pensions will be drawn to Southern California by the lower cost of living and the more comfortably year-around climate.

In the past, fear of water shortage has limited our growth. Today, the construction of Hoover Dam and the Colorado River Aqueduct have removed the last barrier to progress. An abundance of low-cost hydro-electric power and an adequate, controlled supply of water for all purposes make possible and assure the comprehensive development of the coastal plain. So much for the background and the outlook.

The questions which now confront us are theproblems arising out of continued growth and the methods which must be adopted for their solution. Every year since the turn of the century it has been my practice to travel through the east, and occasionally to Europe, to observe the changes taking place and to endeavor to ascertain the social trends. This year my observations were more extended than usual. Aside from questions of relief and unemployment, the most obvious problem confronting the metropolitan areas is transportation. Magnificent efforts of New York and Chicago to deal with the mass daily movement of people into and out of the city only serve to emphasize the fact that a thoroughly satisfactory solution in such cases of extreme congestion is not in sight. This is only one of the examples so competently pointed out by socioligists in recent years of the uneconomic wastefulness of the skyscraper type of development. While the automobile in the past contributed to the growth of our great cities, it is in this age of radio and country-wide electric services bound to become an important factor in

decentralization Down through the ages great men have proclaimed the waste and degenerative influence of the large city. We only mention crusty well-known Cato, and our own Thomas Jefferson. The automobile, with high-speed scientific highways, such as are superbly illustrated by the General Motors Company in their exhibit at the New York World's Fair, will inevitably have a great dispersing influence on our large cities.

Now to apply these observations specifically to the situation in Southern California. Many industries in the not distant future will disperse to the small town and the rural districts. Hydro-electric power, telephone, high-speed highways, aqueduct water systems, the airplane, together with lower land value and taxes and better living conditions, not only have made this possible but comparatively imperative. Therefore, I believe we are on sound ground when we visualize in the not distant future the springing up throughout the coastal plain of Southern California of a multitude of community centers built around groups of industries. The workmen and their families will live in the surrounding area on garden-acre home places. Here in the mornings and evenings and in the slack season they will cultivate their gardens and care for their chickens and other small livestock from which they will draw a large part of the family food supply. Children, instead of being confined to city pavements and the unhealthful and socially unsound environments of tenement houses and apartments, will live a free and natural existence.

To ride with the trend and profit fully from the development of a truly scientific and modern social environment, Southern California must now begin to plan for the future on a broad scale. Having joined the larger cities at a relatively late date, we are not cursed with the skyscraper type of developemnt and the many complications which make the remodeling of most large cities too expensive to be practical.

The first step is naturally and obviously the planning of a comprehensive system of high-speed transportation arteries to be built as needed. These should be designed to make a free flow of traffic in all directions easy, quick, and without the strain of present city driving. Now, before continued development and the building up of values make the cost of rights-of-way prohibitive, concrete steps should be taken to establish the most economic routes.

To maintain established values, a sound solution of the parking problem with relation to metropolitan financial and retail districts should be worked out. We have here the opportunity to build the type of modern development which scientists and far-seeing experts on social questions are presenting to us. We are equal to the problems that confront us as we have been equal to the major problems of the past.

With easy safe transportation, such as civic-minded citizens with expert aid are now planning, the garden-acre home in Southern California will offer all the benefits and pleasures of twentieth century civilization with that close contact to Nature so essential in preserving social equilibrium. In such environs the greatest center of art, learning, science and sound culture the world has ever known can become a reality.

With knowledge from the past, courage for the present, and vision for the future, let us continue to build!!

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FATHER AND SON DINNER

Presbyterian Church
November 6, 1939

Mr. Chairman, Fathers, Sons and Friends:

Anticipating the pleasure of standing here tonight looking into the faces of this splendid group of men and boys - Fathers and Sons enjoying together an evening of happy comradeship - I have experienced a variety of deep emotion.

The sight of a father and son together has always sent a pang of longing through my heart since the day I lost my own father at the early age of ten years. But time moved on and brought me boys of my own - boys now grown to manhood and fathers themselves - and contemplating this group I have recalled happy memories of my own sons when together we fished and hunted in field and stream.

You boys look at my white hair. You realize that I am a grandfathers. So I know just what you are thinking. You are saying to yourselves, "Why, he's an old fellow. Old men think they know it all. They have forgotten what it is to be a boy. They don't understand us."

Listen boys. There is one thing I want you to remember. I speak from long years of observation and experience. And your fathers know this is true. A MAN NEVER FORGETS THE THINGS THAT HAPPEN WHEN HE IS A BOY. If he lives to be a hundred, and travels the world over, the strongest momories of hiw life will still be those of his first ten years. Already, the youngest boy in this room has stored away in the deepest recesses of his mind, a tapestry of vivid memories and bright dreams which neither time nor circumstances can dim. That tapestry will form the permanent background for the action of your future years, and it will color every thought and feeling as long as life lasts.

That is why your fathers feel such deep responsibility for the things you see and hear and learn in these early years. They want you to have as fine a background as they can afford for you - a spiritual and mental picture you will love to look back upon - a Christian home where the ideals God intended for us are taught to you. Every day and every year will bring its own interests. You will be temporarily occupied with your school, your Scout work, your football games. And when you grow up there will be your business, romance and a home and family of your own. Each of these in turn will fill your heart and mind. But the older you grow, the more often memories of these boyhood years will return to you - and the more you will treasure the blessings you now take quite for granted. You fathers have lived long enough

and have lost enough of youth's treasures to realize how little any of us appreciate the good things of life while we can still have them.

You boys think that when you grow up, you will somehow get hold of the master key to life. You will unlock a magic door, and Presto! - the mysteries of the world will unfold to you.

But your fathers have learned that there is no magic door - that the mysteries of this wonderful universe only unfold to the human mind one at a time for those who seek diligently and work unceasingly to solve on certain problem. The master key to knowledge and success is WORK - a steady, conscientious work in your chosen field of endeavor. There is no way to accomplish anything worthwhile except by work.

It is the work and patient effort of countless thousands through ages past that have given to us the rich heritage we enjoy in science, art, culture, religion, government and all the marks of civilization we see about us in this twentieth century. It was the courage and hard work of the pioneer Americans which created for us this greatest free nation known to the history of the world. We, in our time have never known anything but liberty, thanks to our forefathers who delivered us from despotic rule. So, having always had it we accept freedom as carelessly as the air we breathe - as something necessary but hardly noticed. But it takes work to preserve a heritage just as it did to create it. Anything worth having is worth protecting. Did your Dad ever go out on a bright morning and plant a young tree in your garden? He was feeling strong and energetic that day, so he dug a deep hole and he worked in a lot of good fertilizer. He poured plenty of water into the hole, carefully set out the fine plant, tightly pressing the well-cultivated earth about its roots. He did the job so well that the leaves of the plant never withered - and then your Dad went away for a month. He told you to water the plant and pull out any weeds that came up about it. But you forgot. You were too busy with your school and your play to think about that little tree Dad had planted to make shade in your playground. And you know what happened. The tree died, of course. Anybody knows that anything planted in a garden will die if it is not properly cared for.

Well, exactly the same thing will happen to anything in the worl you possess, unless you cherish it, appreciate it and do the things necessary to preserve it. It is

very easy to see the necessity of constant effort to conserve our material possessions, because they are right before our eyes. But much more important than all the material things we find so necessary to our daily comfort are the invisible forces which control all the creations of God's universe. Here in this church, you learn of the spiritual forces, so vital in the life of man. You boys of today don't have to accept as much on faith as the boys of my generation. You have all about you evidences of the combination of visible and invisible forces working in unison to give us the marvelous inventions we use daily. You cannot see sound. Any nobody knows exactly how radio waves travel. Yet instruments have been invented to project sound by radio all the way around the world. And other instruments receive those vibrations and convert them back into the sounds we hear as clearly and as instantly as in the place where they are produced. We really don't know what electricity is. Yet we know how to produce it, and we transmit it even now without wires to perform miracles of service. When I was a boy, we had to accept belief in the power of invisible forces on faith. You enjoy the results of discoveries made by the work of thousands of scientists who have harnessed many invisible forces and put them into the conscious power of man to control.

I merely mention these very evident connections between the seen and unseen forces, to help you to realize the worth of those abstract forces which make or mar our lives. Love, honor, courage, joy, hope, freedom, happiness. Hate, disloyalty, fear, sadness, despair, slavery, misery. Do these words paing pictures to you as clearly as if I named the colors of the spectrum. They should. For these qualities of the soul paint the picture of your life as surely as the rainbow colors paint the sky. There is one of these intangibles which we as Americans have inherited more richly than any other people in the world - Freedom - given to us by the courage and WORK of generations past. FREEDOM - our sacred heritage. WORK - our individual responsibility in preserving that heritage. Only by realizing the Sanctity of Freedom can we give proper dignity to our Work.

And here is a problem facing you boys which wasn't a problem at all in my youth. WORK. Why, sixty years ago, work was the absolutely necessary think in everybody's life. We had to work for everything we had, and there wasn't much choice about what we would do.

Mothers and daughters cooked and washed, cleaned and sewed, filled the oil lamps and made the butter; gathered the eggs and set the hens; canned the fruits and vegetables; and made the lard and soap the family used. Fathers and sons plowed the fields, cultivated and harvested the crops, milked the cows and fed the horses, chopped the wood and carried the water from the spring at the bottom of the hill.

All this was hard, time-absorbing, muscle building WORK for there were no automatic ranges or washing machines, or tractors or mechanical aids to lighten either man's or woman's work. The average family had very little money, for they produced most of the things they needed at home and their needs were simple.

Of course, there were professional men - doctors, lawyers, preachers, teachers, bankers, bookkeepers and clerks who conducted the business of the towns and cities - and always politicians who carried on the then limited process of government. The point is, that everybody who hoped to have the respect of his neighbors and friends WORKED, either with his hands or his head - and usually with both. To produce something the family or the community needed was the American way of winning a position of trust and influence among one's fellow-citizens.

Today most of the tedious, straining jobs of manual labor are done by machines. Mother and sister buy their clothes ready-made; the pantry is supplied from the local grocery store; milk is delivered at the door; the vacuum cleaner makes housework light. Father and brother work at the dairy; in the factory, the garage, the market or in some business where he makes enough money to provide the family with its needs. I said with its NNEDS - not its wants. For few persons in this world ever have all they WANT. It's wanting more things that keeps us interested in life.

The whole family today has less actual labor to perform, and much more time to use as they please.

All these changes should make us happier and enrich our lives - PROVIDED we put our liesure time to some beneficial use. And what is a beneficial use?

I believe that any wholesome activity, mental or physical, which is constructive and planned to improve the environment in which we live is beneficial.

Good reading of autherntic material on any subject is always a method of self-improvement. And if we coordinate our reading with our chosen line of work, we may add to our efficiency and even gain that expert knowledge which brings outstanding success.

Physical exercise, wisely directed, is always beneficial. Athletic games improve body and mind besides giving us a sense of clean sportsmanship and pleasant associations with our fellows. Personally, I find working in my garden not only gives excellent physical exercise and mental refreshment, but it produces very tangible results - in cabbages and roses. And there's a tremendous satisfaction in sharing either cabbages or roses with your friends.

Naturally we want some time of just plain fun - going to the movies, swimming at the beach, driving through the country, or just visiting. All of these things are part of a normal life in the twentieth century. But you will get deeper satisfaction out of these pleasures if you do them with a purpose. Choose carefully the movie you see, either for an inspiring plot or an instructive theme. When you go to the beach, swim hard, relax on the sand and breathe deep of that fine air with its salty tank and let the bigness of that boundless ocean become a part of your being. When you visit, choose a friend who can tell you something about a subject in which you are deeply interested - or drop by to see someone who needs a word of cheer from you. Life is too short to waste time with idle fold who do not need you, nor you them. Make each precious hour of work or play count for somebody's betterment. That is the way to get a kick out of things. That is purposeful living. Unless you have a purpose in life, you will soon be bored and find yourself drifting.

Men who worked with a purpose have given human society all its prizes. Statesmen, who studied and planned, and soldiers who offered their lives and fortunes gave to America the Freedom we cherish so dearly.

Today, many men are trying to escape work. Millions of our citizens are thinking the Government owes them a living. They want to stop work in the prime of life - at the age of fifty, mind you, and live on a pension the rest of their lives.

Somehow those misguided people have failed to recognize the Dignity of work. They have ceased to think

of themselves as God's most perfect creation - made in God's image and with a mind and soup capable of performing a part in the might work of creation. Did you ever think of that? Man as God's parner in perfecting the world by converting into useful form the vast raw material with which the earth abounds?

Without man's intelligent work, this would be a very crude world. The rich soil must be cultivated and planted if it is to produce the foods we eat and material for the clothes we wear. The rich mines must be worked if we are to have their treasures for their many uses in science and industry. The forests must not only be cut and made into lumber, but they must be replanted if the supply is to last. And all these things must be transported from field and mine and forest to the factories, and finally distributed to the people who use them.

This conversion of Nature's unmeasured storehouse of raw material into the countless articles man now wants and uses, means WORK - honest, thoughtful, intelligent work. Whey, it is staggering to think of all there is to do in this complicated civilization which is ever demanding more and more in new and different form from Nature's unlimited supply. Then there is the necessity for systematic conservation of resources, if the supply is to remain unlimited. That is something we are just beginning to think about here in America. Isn't it all interesting and amazing?

And yet, some say there isn't any work for you boys. How absurd.

Anybody who stops to think must know there has never been such a variety of opportunities for energetic young men as there are today.

New industries are being born every year. Automobiles - airplanes - movies - radio - television - all these mighty industries employing millions of men didn't exist when I was a boy. And they are only in their in infancy. This is an age of ingenuity. Brains are more important than muscles in the present set-up. You have to think up a better way to sell a product - invent some device to improve any article of daily use; contrive a more efficient method of distribution. All our modern inventions have crowded on us so rapidly that things are in an awful muddle. There are so many things to be perfected. Practical ideas

are at a premium everywhere. There is work to be done. It isn't the haphazard sort of work that just anybody can do. The twentieth century wants experts - young men with keen minds and healthy bodies who specialize and train themselves for technical work. This demands that you study with a purpose - work with enthusiasm - and exercise your God-given brains with the realization that you are co-creators with God having His unlimited material and spiritual resources at your command.

In closing, let me say that I hope you do not still think of me as just a white-haired Grandfather. Men at any age are only "grown up boys." Life is just as full of problems for the boy of sixty, as for the boy of sixteen. The main difference is that you of sixteen are such optimists that you are sure you can find all the answers by yourselves. We of sixty have learned to concentrate on one or two problems which, with faith and all the help we can get, we HOPE to solve. And we feel very, very grateful for the work of those who labored in former generations to make the way as easy as it is for us today.

Yes, we are all just Boys - children of God trying to play as best we can the part assigned to us in this drama of Life. You boys of sixteen are looking forward. We of sixty must keep looking forward too. But Time has given us a book of personal experience to which we frequently refer for guidance in making plans for present and future. Since you have not yet had time to gain experience for yourselves, I beg you to learn well the history of the ages which has been recorded for you. Know what generations before you have done. Find out the principles which have made for progress and the false doctrines which have led to chaos. Manners, and language and customs change, but there are eternal TRUTHS which illuminate all the pages of human advancement. To know these truths, to recognize them as the eternal verities, and to weave them into the fabric of your character, will enable you to avoid the mistakes made by your predecessors. Never scoff at history. It is the reference book of inexhaustible material from which you may build your knowledge of mankind's successes and failures through the past - and the greater your knowledge, the greater will be your capacity for building constructively for the future. Each generation is a link in the enless chain of human progress toward that Perfection which is our goal. Will your generation make the world better because you have lived in it? Will your children inherit freedom enriched by the responsibility you assumed in maintaining its stability? Will you dignify the work you have chosen to do by regarding it as your part in the Divine partnership of God and Man? Will you sanctify the Liberty

you enjoy by self-control and by handing the torch of Freedom on to those who come after you?

These questions are yours to answer.

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Meeting of the

ADVISORY COUNCIL OF
THE ALL-YEAR CLUB OF SOUTHERN CALIFORNIA, LTD.

December 11, 1939

SOUTHERN CALIFORNIA -- EMPIRE IN A DESERT

These pictures we have just seen reveal an amazing contrast between Southern California in the early days and the Southern California as we know it today here in 1939. Imagine the contrast if Cabrillo, sailing along our coast in the pleasant fall of 1542, had been able to take motion pictures for us of the empty wilderness that stretched before him to the mountain tops. It would seem in looking back over the long trail we have come since that time that a great empire has miraculously arisen in spite of nature and the rules of man to the contrary. That is to say we are building our homes, engaged in the task of making our living, enjoying the fragrance of orange blossoms and the shade of palm trees in the midst of a sound and beautiful empire which would never have happened if nature had not been given a lot of help by the hand of man. Most great cities - New York, Chicago, Philadelphia, Detroit, and others - were helped to growth and greatness by some great natural advantage - a harbor, a river, a favorable location with respect to trade routes which eventually developed into a rail or a shipping center. Los Angeles, now the fifth largest, and with next year's census completed, perhaps the fourth largest city in America, had none of these natural assets. When Jedediah Smith, our first American visitor or tourist, came overland to California in 1826, he found a very sketchy civilization compared to what we know today. While giving due credit to the poetic writers for their pictures of California in the days of the dons when tinkling guitars, dashing caballeros and gayly clad senoritas filled the land - let's be practical enough to admit they didn't fill the land at all. There were fiestas, of course, from time to time at the villages or the great ranchos when all the population for hundreds of miles around would arrive on horseback or in rumbling carts at the scene of the celebration. But for the most part, Southern California in 1826 was a land where the few and widely scattered people worked tremendously hard and enjoyed few comforts and conveniences as we understand them today. The houses were made of sun-dried bricks, there were no glass window panes to keep out the wind, the weather, or the insects. For the most part beds were wooden frames laced with rawhide with a few Indian blankets thrown down on top - instead of Beauty Rest mattresses. The chairs were rough hewn benches without paint or other adornment.

Heat was supplied by inadequate fireplaces, for while Ben Franklin had invented the furnace in Philadelphia, news of it had not yet reached Southern California, and if it had, the steel mills down at Torrance weren't built, so the pioneers would have had to do without the furnaces anyway. Floors were generally the bare earth, not polished hardwood with thick rugs or linoleum. Breakfast, I am told, consisted of a bowl of atole, a thick gruel or porridge - not ham and eggs - and for lunch there was more atole, sometimes with vegetables in it, the addition of the vegetables or meat varied with the season of the year and whether these extra ingredients were available because there was no cold storage and no canned goods in those days. And supper, by way of variety, was another bowl of atole. I don't think many of us would have left our relatively comfortable eastern homes for California's charms in those days. And yet within the space of 113 years we have built one of the world's greatest empires. What brought about this great change? Certainly not our harbor - for we had none until we dug it out of the mud flats. Certainly not our lakes or rivers, for California was dust all summer and muddy in the winter. Certainly not our strategic location, for we were 3,000 miles away from the center of population and at the end of the line as far as any kind of shipping in those days was concerned.

Then what was the magic formula by which this whole area was changed? What made the formula for the growth of Los Angeles different from that of other great cities? In many cities population followed industry or the opportunity for industry. Here we find industry, cultural development and so on followed population. In 1860, eleven years after the gold rush, the population of Los Angeles was less than five thousand. San Francisco had 56,000, New York had one million and three-quarters, Philadelphia had better than half a million. By 1880, the population of Los Angeles had nearly trebled. By 1890 it exceeded 50,000, an increase of more than 400 per cent in ten years. In 1900 it had doubled again. The 1900 census shows the population of Los Angeles to be 102,479. The next decade, 1900 to 1900, trebled our population and by 1920 we had 576,000 Los Angeles citizens. A few minutes from now Don Thomas, I suppose, will make these figures look like chicken feed when he tells you how many tourists he and his splendid staff through their activities have brought to Southern California this past year. Judging by the record of the past few years it will probably be in the neighborhood of a million and a half tourist visitors each year - three times the entire population of Los Angeles

in 1920. Still that figure of 576,000 population in that year shows how Los Angeles grew and how PEOPLE were a big factor in helping us to make a blooming paradise out of an empty desert wilderness.

After the people arrived, and not until then, did industry begin to locate in Southern California. Frank Sieberling, then head of the Goodyear Tire & Rubber Company, was the first to discover that our growing population of Southern California merited the location here of one of his branch plants. This was the first of the many big branch plants that are now in Los Angeles County, and it came here as recently as 1918. Other branch tire factories, steel plants and auto assembly plants followed. Now the Los Angeles area is recognized as the fifth best consumer market in the United States. For the farm country around, the population growth has brought prosperity. Authorities rate Los Angeles the second best market in the country for the consumption of fresh fruits and vegetables. New York is ahead.

In the meantime, back in April, 1908, a courageous and far-sighted group of Los Angeles citizens had stood on a bluff overlooking San Pedro Bay. In imagination they visualized long miles of docks, warehouses, freight sheds, industrial plants with ships of the nations coming and going. Far-seeing as those men were, I doubt that the vision of any one of them even approached the growth and development which actually took place. On August 28, 1909, San Pedro and Wilmington were consolidated with the City of Los Angeles. And though San Franciscans smugly scoffed and ridiculed the leaders of the project - asking if they were keeping the Los Angeles harbor well watered - they had to stop their scoffing when the man-made harbor of Los Angeles passed the tonnage figures of San Francisco, a tonnage lead it has held ever since.

I have a very vivid recollection of the rivalry and feeling which existed in those years.

After some of the mud had been dredged out of what we call the Los Angeles Harbor and facilities were made ready for shipping, we found we had no ships so we organized the Los Angeles Steamship Company and acquired two ships which were given the names "City of Los Angeles" and "City of Honolulu" in honor of the terminals of the new line. For the maiden trip of the City of LosAngeles, Frank Wiggins got together a shipload of our leading citizens as a good will party to drum up an exchange of tourists and freight business with the Hawaiian Islands. It was my privilege to go on that

trip as one of the boosters of the new enterprise. In the Islands we were received with open arms as deliverers from the shipping monoply of San Francisco. On the return, my family and I took the City of Honolulu which, you will probably recall, caught fire and burned at sea on its maiden voyage. Between two and three hundred of us took to the life boats one morning and were picked up late that afternoon by the tramp freighter, McFarland, on its way to China with a cargo of cedar poles and coal oil. The next day we were transferred to the transport Thomas on its way to San Francisco from the Philippine Islands loaded with officers and soldiers. Before reaching San Francisco a press boat came along side with some 25 or 30 correspondents and photographers from the San Francisco newspapers and press association representatives. To them it was a great lark to catch cush a bunch of distinguished Los Angeles citizens in disarray and with misfit, borrowed clothing, whose upstart venture into the shipping industry had come to grief at the outset, and they proceeded to make the most of it. They seemed to take a fiendish delight in photographing us at our worst. I happened to be standing on deck close to a group of these correspondents and overheard them discussing a plan to give us the works when we reached San Francisco. Their scheme, as I gathered it, was to meet us at the wharg in San Francisco with brass bands, present us with new apparel and parade us up Market Street to the Southern Pacific Station and ship us off by train to our mud flat harbor. You can imagine the capital which they would have made at our expense in the newspapers throughout the nation. Immediately I hurried to the radio operator and wired Frank Wiggins, giving him an account of what I had heard and requesting him to seek Harry Chandler's influence in getting the Secretary of the Navy to have the S. S. Thomas docked at San Pedro. Just when I was about to give up hope of getting any action and when we almost were in sight of the Golden Gate, I noticed a great commotion among the officers of the ship and finally we began to change our course to the South. I thought for a while there would be a mutiny of the ship among the officers and the men who had friends waiting for them at the dock in San Francisco, but we landed finally at San Pedro with our dignity intact and another milestone was passed in the history of the Harbor.

But to return to the growth of LosAngeles and Southern California.

Only in one way did Los Angeles deviate from the formula which dictated that industry, culture and progress follows population. That was in the matter of water supply.

Naturally, Los Angeles, growing as it was, couldn't wait for the people to come out and then build a water supply. If we did that the population might have died of thirst while industrial progress and agricultural development would have been at a standstill for lack of power and of water for irrigation. It was, in fact, the discovery of the Los Angeles River that brought the establishment of Los Angeles in 1771 and in recognition of the importance of the water of this stream to the life and growth of the new community, the ownership to all the water of the Los Angeles River was officially granted to the pueblo for all time in a royal proclamation by Carlos III of Spain. If you go down to Olvera Street you can still see the Zanja Madre or Mother Ditch, built by the people of the little pueblo which ran from the River to the vicinity of the old Plaza. History tells us that the Indian woman who dipped the water from the canal to be carried to the several households was the City's first municipal employee. Later, the water-carrying Indian woman was replaced by men who devised a method of delivering each family its quota of water by means of a barrel swung between the handles of a wheelbarrow. Still later these barrels were succeeded by an ox-drawn water cart. This might be recorded as the first appearance of the water wagon in the City of Los Angeles.

In recent years the Los Angeles River has been pictured by local citizens and visiting critics as a stream whose bed must be sprinkled regularly to keep down the dust, but despite all of this fun at our expense the fact still remains that except for a few scattered wells the Los Angeles River for a period of 133 years served as the sole water source of this community.

Water has been the outstanding bottle-neck, the limiting factor in the growth of this area. Its lack has been the skeleton in our closet and the ghost at our banquet. In 1905, with a population of 160,000, Los Angeles suddenly was confronted with a serious water shortage. Bill Mulholland, Chief Engineer of the municipal water bureau, pushed across the desert in a buckboard looking for an additional water supply and came whooping back, saying he found it in the snow-fed streams on the east slope of Mt. Whitney, 250 miles away; he claimed there was enough water for a city of a million souls. The idea of building an aqueduct longer than had ever been constructed before captured the imagination of our leaders and people who did not know fear and refused to recognize an obstacle that stood in the way of the progress of this city they had founded on a desert. They solved the problem of storing water until the population of a million should need it by placing it to productive use on the floor of the San Fernando Valley. This area, larger than

all the rest of the city, was annexed because it offered natural underground storage from which the city could pump the water as it was needed after it had been put to use growing foodstuffs which the people needed.

All thought the water problem had been solved for all time. Even Bill Mulholland with his splendid vision thought we had enough water for 75 years. But when the city hit the one million figure in the 20's, it was just around the corner from a water shortage. With no other source available we had to turn to the abundant Colorado River and set about making the plans for the $220,000,000 Metropolitan Aqueduct which will supply the water needs of 2,000 square miles of our coastal area, embracing homes and gardens and industry and commerce for an ultimate population within this century of over ten million people, probably making this the largest community in the world. E. H. Herriman, the railroad empire builder, after an inspection trip to Southern California, was so impressed with the growth resulting from the building of the Owens River Aqueduct that he O.K.'d the building of the Pacific Electric Railroad across the Pass into the San Fernando Valley and sent his engineers on to the San Juan, tributary of the Colorado, to see if a gravity route could be found to bring the waters of the San Juan River to the coastal plain of Southern California, and stated at a banquet given in his honor in New York that in 100 years from now it would not be Paris, London, New York or Chicago that would be the largest city in the world, but Los Angeles, provided she could get the water to grow on -- we have the water.

I am telling you this so that you will know you can carry on your established and proved formula of growth, knowing that the thousands attracted to us through the community's method of bringing about selective immigration, will' have electricity churned from the mighty Colorado River on its way down to the sea from the mighty backbone of the continent, and that their drinking glasses will always be filled with the melted snows from those mighty peaks.

Once more Southern California has reversed the rule that population shall precede progress.

In the supply of water, we have made provision not only for the population we have, but for that which we know is on the way. We are READY - with streamlined, modern methods to follow through with the progress that began when the first tourists visited this land of sunshine. Those tourists, returning home, were stricken with a strange longing

for the pleasant land by the Pacific shore. They sold their holdings, packed their belongings, and moved WEST. They invested their capital, their brains and their ambition in the building of this new empire.

Tourists today are doing the same thing.

With the glamour of Hollywood star-dust, like an all-year Christmas tree, attracting the eyes of the world toward Southern California; with our irresistible climate and scenery, backed by the sound economic structure built by the patriotic citizenry and proclaimed by our ALL-YEAR CLUB, we face the future undaunted.

Europe is in its death struggle. The Era of our Atlantic Seaboard is on the decline. Civilization's westward trek continues. The Pacific Era is dawning. Let us awaken from the lethargy of depression and realize that destiny is calling to us to make Los Angeles the World Wonder City of Tomorrow.

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On the Occasion of the
25TH ANNIVERSARY OF THE
ANNEXATION OF THE CITY OF VAN NUYS
TO THE CITY OF LOS ANGELES

May 3, 1940

Mr. Chairman, Mayor Bowron, Distinguished Guests, Ladies and Gentlemen:

The 25th Anniversary of any event worthy of commemoration is always an occasion for celebration. This evening Van Nuys, as the capital of the San Fernando Valley, is happily celebrating the 25th Anniversary of the day on which it was annexed to the City of Los Angeles.

On such an occasion, it is appropriate to review the progress made - to compare population and property values we had back in 1915 with the population and property values we have now in 1940 - and by these comparisons to show how fruitful this union has been.

Statistics are usually dull. But figures are the only means we have of measuring tangible civic assets.

The few figures I have chosen to sketch the pictures - then and now - denote such vivid contrasts and such rapid forward movement that they are, in fact, dramatic.

Population ---	Then	5,000	
	Now	95,000	
			Gain -- 1900%
Valuation ---	Then$	33,000,000	
	Now	175,000,000	
			Gain -- 530%
Annual Taxes -	Then $	380,000	
	Now	3,800,000	
			Gain -- 1000%

These figures, remarkable as they are, tell only part of the story.

To those of us who remember the trackless expanse of these treeless acres before Los Angeles Aqueduct water came to quench the thirst of this sunkist valley, the picture one sees from Mulholland Drive on a clear day, seems unbelievable.

Prosperous towns dotted about amid green acres of rich citrus, walnut and fruit groves, alfalfa fields and dairy ranches - and homes by the thousand, large and small,

mansions and cottages - each surrounded by pretty gardens and colorful flowers and all interlaced with ribbons of paved streets and highways, making the whole a solid community.

This richly varied landscape is the visible evidence of the wealth created by those 1031 miles of steel water mains which form an invisible network under the floor of the Valley. Yes, the faith and courage we exhibited in joining with Los Angeles to make our present water supply has been amply justified.

But what of the future? No recounting of past success is worthwhile unless we use it as a basis for future plans and continued progress.

That part of the San Fernando Valley annexed to the City of Los Angeles id today the fastest growing area within the metropolis. Our building permits over the last year averaged about 1000 per month in number and about $1,000,000 per month in value. Last month 1156 permits were issued, with a valuation of $1,464,000. Such rapid growth, accelerated by F. H. A. loans and the extra activity in our airplane factories, naturally carries a certain amount of momentum for the immediate future.

But steady, substantial growth such as we have enjoyed in the past, can only be maintained by intelligent planning for the highest interests of all concerned.

Even a casual survey of this valley area shows that its productive soil, year-around growing season, and pleasant climate are its greatest assets. Yet, since we were annexed to the city, taxes have been too high to allow large scale farming to be profitable. Only intensified and specialized farming such as poultry raising, dairying, and fresh fruits and vegetables, for the city market could pay their way.

The real backbone of our development has been the garden acre home.

The entire valley is dotted with samll homes on plots from onehalf to five acres in size. In these modest, comfortable little homes reside families who live on the fat of the land with a minimum of cash expenditure. A few nut and fruit trees which add increasing permanent value to the land from the day they are planted - a garden plot which supplies the table with vegetables in season - some chickens or rabbits to enrich the menu and perhaps bring in a little extra cash - all these are cared for by an energetic man in his

leisure time. If there are children, they learn by helping him - the richest lessons in the fundamentals of living. From such an acre, the thrifty housewife fills her pantry for out-of-season use, and the entire family, sharing the routine of daily chores, enjoying together the fruits of their mutual labors, become a partnership--the kind of social and economic partnership which is basic to the well-being of a healthy nation.

This little garden acre home, found at its best here in the San Fernando Valley, is the modern counterpart of the good old American Farm where our free nation had its beginning, and from which we can never depart in principle if we are to maintain that freedom.

In very recent years, since Los Angeles has become the fifth largest city in America, with the Motion Picture Industry, Oil Millions and various new industries pouring great wealth into our environs, the San Fernando Valley has come into favor as the location for "gentlemen's estates." We now boast many notables among our citizenry whose beautiful mansions and broad acres add prestige and wealth we old-timers scarcely dared to dream of.

But let us not have our heads turned by this recent influx of wealth into the Valley. Remember, the number of rich people is always very limited. It is, after all, the great number of small income families who make a city. Retired "little business men," retired army and navy men, and pensioners from industries and municipalities back in the less favored climes on the other side of the Rockies, young men employed all or part time in Los Angeles business, these are the folk who will bring to us the greatest buying power, and these, by their numbers, will increase values and bear the biggest share of our tax burden in the ultimate development of this Eden Valley to its highest use.

Since the founding of the townsite of Van Nuys in 1911, my hobby has been the garden acre home. And today, such development seems more important and more popular than ever before.

Here, then, briefly is a plan by which the City of Los Angeles can most effectively co-operate with this area, with the greatest possible mutual benefit to the city as a whole. And I know from experience that it will work.

All of us are familiar with the splendid pamphlet on gardening which comes along with our water and electric bill each month. In the same envelope is another pamphlet telling the uses of various electrical devices, and giving some recipes for tempting dishes which may be prepared on the electric range or in the electric refrigerator. These, of course, are published for the purpose of promoting the sale of water and electricity of which Los Angeles has a considerable surplus at present.

It was suggested recently that the Bureau of Water and Power set up a "Model Garden Acre Home" demonstrating thereon the devices described by the electric department and the suggestions contained in the Gardener's leaflet. With notice of such a Model Home carried to every family using electricity and water, it is possible that many thousands of people could be brought into the valley each month with the ultimate result that large numbers of them would plan to own places like the one demonstrated. This would mean increased revenue for the city as well as increased development in the valley.

The following figures clearly show the immense possibilities:

At present there are approximately 50,000 acres of undeveloped land in this annexed area which could be divided into as many commercial acres 100x300 with a liberal sprinkling of the popular gentlemen"s estates.

If the merits of this location for the garden acre home were demonstrated to those wishing to locate in Southern California, these 50,000 acres which are now a burden to the ranchers could be liquidated and developed into units with an average value of $5,000 - a possible total of $250,000,000 of taxable property. Assessed at 50 cents on the dollar, such a development could produce an additional annual tax revenue of approximately $6,000,000.

Each of these 50,000 units using an average of $5 per month in water and power would mean three million dollars additional annual revenue to the Water & Power Department of the City of Los Angeles.

I firmly believe that it is in the realm of possibility to bring this about within ten years or less by putting in a practical demonstration as outlined above.

Think of the employment such a program would give in all branches of the building industry! Allowing the maximum of 10 years for the fulfillment of this program would mean the construction of 5000 houses per year. At the low average cost of $3000 each, this would be $15,000,000.

The labor used in actual construction, plus that used in the manufacture of supplies and fabrication of materials required, would aggregate 80% of the total cost - 12 million annually for labor - most of it in the City of Los Angeles.

Then see what such development would do for business!

Each of the 50,000 new families within the city limits would conservatively bring $100 per month purchasing power - $60,000,000 annually.

Downtown business, now so overburdened with taxation and suffering from decentralization, could draw a large portion of this trade by widening Riverside Drive to make a free-way in to the Civic Center and providing free parking space somewhere in that area between Union Station and 10th Street, Los Angeles Street and the River - clearing the most blighted slum section for this purpose.

A shuttle 5¢ bus service from this free parking area, making a circuit of the downtown business district, would make that section conveniently accessible and help stabilize downtown business values.

A well-located, convenient and desirable site for this "Model Garden Acre Home" has been offered to the City, rent free. A considerable amount of preliminary work has been done. But it seems to have been side-tracked in the Water Department offices for the time being, at least.

We hope that a better understanding of this plan of development by the civic leaders here tonight may be the means of hastening the project and establishing the first demonstration of an educational campaign toward the establishment of the ideal suburban home for Los Angeles.

If you think this is visionary, I ask you to remember that ideals are like stars - we never quite reach them, but like the mariners, we chart our course by them. The possibilities are definitely here. Their realization is a goal worth setting for our future progress.

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THEN AND NOW

On the Occasion of the
DEDICATION OF THE MULHOLLAND MONUMENT

August 1, 1940

Mr. Chairman, Mayor Bowron, Distinguished Guests and Friends:

I consider it a privilege to be among those who are assembled today to dedicate this monument to the memory of William Mulholland - the pioneer and engineer - whose high vision and practical work made possible the transformation of Los Angeles from the small city it was when he came here into the great metropolis of 1½ million we proudly claim today.

Standing on the very spot where he once lived and dreamed and worked - burning the midnight oil to gain the knowledge which would bring his dreams into reality - two pictures are in my mind. One is a memory of the Los Angeles I found on coming here just after the turn of the century; the other is of the actual city we see around us now. Let me call these pictures "THEN" and "NOW", and sketch them briefly for you.

THEN, the city of Los Angeles lay over yon hills, centering about the old Plaza, straggling a few miles west along Wilshire Boulevard, and a few miles south toward San Pedro, but never daring to spread far from the Los Angeles River from which most of its limited water supply was pumped.

THEN, the San Fernando Valley spread out as a typical California desert valley - with fields of barley and a few large ranches. And on the floor of that potential garden-spot lay the parched bones of vast herds of cattle that had perished there in dry years. The sand storms which THEN swept the almost treeless valley precluded any idea of using it for residential purposes.

THEN, a few daring and energetic men who sensed the latent possibilities of these environs, had laid out sub divisions, hoping the friendly climate would lure many of the increasing number of winter visitors to make their homes here.

THEN, Los Angeles was known as a winter resort but no one thought of inviting visitors from the East to share the hot, dry summers.

William Mulholland gazed on the picture as it was THEN. His discerning mind saw all the possibilities dormant in this sun-kist land. And he saw the limitations set upon

every avenue of development by the lack of available water. A man of action - daring to try the untried - he coralled the waters of the High Sierras as they flowed into the Owens Valley, drove them through mountains and over deserts, and harnessed them in reservoirs and pipe-lines to serve this thirsty area.

NOW, the city of Los Angeles spreads out over 450 square miles, South to the harbor at San Pedro and West to the farthest end of the San Fernando Valley. NOW that erst-while desert Valley is not only a community of productive garden acres, but the mecca of thousands of home-builders, whose estates, both large and small, exemplify the best features of ideal suburban life.

NOW, Hollywood and other subdivisions which were struggling for existence thirty years ago, have overflowed into the surrounding acres welding themselves into a solid community from the mountains to the ocean.

NOW, the verdant lawns, shade-giving trees, and the green farmlands have converted the city and its environs into an ideal year-round resort with the result that the All-Year Club reported over a million visitors in 1939.

NOW, business and industry have grown to meet the demands of our unprecedented population increase. William Mulholland lived to see this picture. Still extending his vision, and realizing the necessity of providing water far beyond present needs, he conceived and started the Colorado River Aqueduct, now nearly completed, which will supply the needs of ten million people.

The realization that the contrast between those pictures - THEN and NOW - was made possible by the daring leadership of one man in the fulfilment os his community's greatest need is a challenge to each one of us in this hour of the world's need for constructive effort.

The laws of Nature are so constituted that her plans are only revealed to those who, forgetting self, go wooing in the treasureland of Knowledge, to find the answer to unsolved problems. And with the knowledge gained, there must be determination, such determination as takes possession of a man to the subordination of all other desires, and carries him through, bo the goal of Achievement. As such inspired men mount ever higher on the Pinnacle of Achievement, their ideals extend still further - until they mingle in the misty heights with unseen forces.

So William Mulholland became a co-creator with his God - an engineer of Destiny.

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Before the

WATER AND POWER RESOURCES COMMITTEE

September 29, 1941

The Boulder Canyon Project Act became effective in June, 1929. One of its provisions was to the effect that before work could be started on Boulder Dam the Secretary of the Interior must have in his possession firm and binding contracts for the sale of power, which, together with other revenue, would return the annual operation and maintenance expense and the cost of the structure with interest in 50 years. In the Fall of the same year, the then Secretary of the Interior Wilbur received applications for power contracts under the Act which in total exceeded the estimated generating capacity.

In the negotiations which followed, the District was confronted with the necessity of determining how large its commitment should be. It was realized that Boulder Dam would have to be the major source of the District's energy for pumping water and that if the opportunity was not seized to nail down the power at the time it was being distributed, it in all probability would not be available when needed. On the other hand, to commit the District to its full ultimate requirements would impose an excessively large annual cost for carrying the power until it was needed. On the basis of authoritative estimates as to the growth of Southern California and its requirements for additional water, a commitment for 36% of the firm energy, with first call on all secondary energy, was believed to be justified.

This set-up seemed to solve the District's power problem for as far into the future as could be economically foreseen. It was on this basis that the contracts were finally signed in April, 1930. Work on Boulder Dam was started almost immediately and a few years later the Aqueduct was well under way.

In the meantime, a depression had developed of proportions hitherto unequaled. The Aqueduct was started at the very trough and was completed just in time to avoid the scarcity and curtailment incidental to the current national defense program. But in the meantime growth and expansion had come to a standstill everywhere. The population of Southern California increased, but not at a normal rate. Within the last year the upswing has been resumed at a rate which in the next ten years will recover a great deal of the growth lost during the depression years.

However, along with the abnormal economic period occurred a succession of abnormally wet years. While the need for the Aqueduct was no less imperative for the security of life and values in Southern California, the rate of growth due to the depression and the abnormal rainfall reduced, or rather deferred, the anticipated initial demand for water. Were it not for the security now afforded by the Aqueduct, the great industrial activity in Southern California from the Mexican border to Santa Barbara on the scale witnessed today would not be a reality. We have received reports from Federal authorities and others to the effect that the billions being expended for plant expansions would not be sound from a military or economic standpoint without the assured water supply available from the Colorado River Aqueduct.

The Aqueduct could not be duplicated today at twice or three times the cost, assuming it could be consturcted at all under present conditions of scarcity of materials and equipment and of skilled labor, and our airplane industry would be decentralized and moved inland where an assured water supply would be available.

Beginning in 1938, under the terms of the power contracts the District became obligated for the payment of the power it had contracted for but could not use. This obligation has increased on a sliding scale from $81,300 in 1938 to about $150,000 a month at the present time.

A vigorous effort was made to ease the burden by disposing temporarily of the District's power as permitted under the contract and some sales were made to power companies in the Needles and Kingman areas. During the great drought in Arizona last year when power reservoirs became practically empty, the District's power probably saved the economic life of the Phoenix area.

Considerable as these sales were, they still left a large burden on the District. The revision of the Boulder Canyon Project Act to an amortization basis has further modified the District's obligation along with that of the other users of power from Boulder. However, the total payments for unused power to date amount to almost 4 million dollars.

During the last few months the situation has altered materially. As a part of the national defense program it was decided to build a $63,000,000 plant in Nevada for the production of magnesium, predicated on using all the power that

could be spared from Boulder. Almost overnight the position of the District was altered from that of seeking temporary customers for its power to being requested to relinquish as much as could be spared. The suggestion was made by someone that the District's power be sold to the magnesium plant at a price of 1.163 mills per kilowatt hour, plus generating costs, bringing the amount returned to the District to 1.7 mills per kilowatt hour. This figure is the current price of Boulder power but does not include the cost to the District of carrying this power to the present time in order to have it available. We of the District immediately expressed our willingness to cooperate in every way with national defense and relinquish our power until required at its actual cost. The return to us of the actual cost without a cent of profit has been our sole desire. However, we do feel in the interests of the taxpayers that we should be made whole and that the total cost, in our opinion, should include the payments that have been made to date for the purpose of carrying the power and having it available, amounting, as I said before, to about 4 million dollars at the present time.

If these payments are included and returned over a period of 10 years as contemplated in the arrangement being worked out with the O. P. M. on behalf of the magnesium plant, it would only increase the cost of the power from 1.7 mills per kilowatt hour to 2.163 mills per kilowatt hour, or an increase of about .4 of a mill per kilowatt hour. The difference represents only about one-third of a cent per pound in a product selling, I am told, for about 27¢ a pound in carload lots. This price of 2.163 mills per kilowatt hour is probably less than power can be obtained for the purpose anywhere in the nation. The District is therefore not in the position of making an unreasonable request or of attempting to profit at the expense of national defense. It has been estimated that the power from the recently authorized Bullshead Dam, which is intended to take up the slack as the District's power is required for pumping water in the Aqueduct, will cost about 3 mills per kilowatt hour, or almost one-third more.

Our only desire is to be made whole. We feel that under the circumstances the taxpayers of Southern California should not be made, in effect, to subsidize a private industry by furnishing power at less than its cost and less than a competitive price.

We were bold enought to step out and provide this power and construct the Colorado River Aqueduct when it could be done and we should not now be penalized for doing so. We

believe our proposal is fair and equitable and one which in all fairness to the taxpayers of Southern California should be accepted.

Recently Mr. Emme and I and the members of the District's staff went back to Washington and laid the matter before Mr. Jesse Jones and received a very favorable hearing on our position. The matter is now pending and we have every assurance that our proposal will be accepted. It is imminently fair and proper and should not in any way conflict with the interests of the other users of Boulder Dam power. Everyone in Southern California has a definite financial interest in the District's receiving a fair deal for its power. If this burden for unused power is removed from the District during the ensuing development period, I am confident that a very substantial reduction can be made in the District's tax rate in spite of rising costs. After ten years of operation and expansion the problem of carrying the power for future requirements will be solved to all practical purposes.

It has always been my hope and desire that the District's unused power could be absorbed by the local distributing agencies in the Los Angeles area until required by the District. The people of Southern California who have obligated themselves for this great project should receive every possible benefit from it. Using the power in Nevada will not be nearly as advantageous as the creation of new and especially basic industries in the Los Angeles Metropolitan area.

However, growth and industry in a desert community will follow the water and the necessary power will be found. The thirteen Cities of the District have an invaluable asset in their Colorado River water and time will amply reward them for their courage and foresight.

I hope in a few days to be able to give you the good news that the sale of the District's excess power has been concluded on the basis outlined as it fairly and equitably should be.

* * * * *

MEMORANDUM OF REMARKS MADE BEFORE REPRESENTATIVES OF THE DEPARTMENT OF THE INTERIOR IN THE OFFICE OF MR. COFFEY RELATIVE TO THE SALE OF THE DISTRICT'S UNUSED POWER FROM BOULDER DAM.

January 13, 1942

Gentlemen:

We welcome you to Los Angeles. We want to assure you that every facility and convenience we possess is at your disposal in working out a sound and equitable arrangement for the utilization of the District's temporary surplus power for the production of magnesium. Our time and facilities are at your disposal because nothing must be permitted to interfere or impede the Nation's efforts directed to the winning of the war.

We as officials of The Metropolitan Water District of Southern California, entrusted with the responsibility and obligation of representing the interests of the almost two million people comprising the District, hope that we can equitably and fairly fulfill our obligations to our citizens. We want to call your attention to several pertinent considerations having an important bearing on these discussions.

The District, in assuming the obligation for a large share of the Boulder Dam power in advance of its requirements, contributed largely to the making possible the construction of Boulder Dam on a self-liquidating basis. In addition, the people of the District assumed the entire responsibility of constructing and financing, including the payment of interest, of the entire Colorado River Aqueduct project. Practically no benefits such as were accorded the Tennessee Valley Authority, the Bonneville Dam, the All-American Canal, the Central Valley project, the Grand Coulee Dam, and numerous other projects throughout the Nation, were received by the District.

The District, after constructing Parker Dam, turned over to the Interior Department one-half of the power generating capacity of the site.

We want to point these things out to you as indicating the willingness of the District to cooperate with the Federal Government and to stand on its own feet when it came to paying the bills.

The proposition which the District submitted to the Secretary for the sale of its power we believe should be considered in the light of our record as I have outlined. If the power to be generated at Davis Dam is sold on this self-liquidating basis, I understand that it will be at a

price considerably higher than that which the District requested in the proposal to which I have referred.

When I was in Washington last fall I felt that it was my duty as an official of the District and as a representative of its citizens and taxpayers to present the District's position and its record to Secretary Ickes personally. However, at that time he happened to be out of the city and I was unable to do so. I feel that I am in a rather difficult position in not having gotten this information to him. I would like to impose on you, his representatives, to the extent of asking that in the course of your discussions to tell him our story. Also convey to him that in the interest of the national war effort we are willing to leave the matter entirely in his hands but hope that in the light of all the circumstances he will view the District's proposition in the same light as do the people here in Southern California who, in addition to assuming and carrying their own burdens, will, be as an integral part of the Nation, also contribute to the great number of public projects which have been given much more favorable consideration. We have every reason to feel a great confidence in placing ourselves and out interests in the hands of the Secretary.

* * * * *

THE COLORADO RIVER AQUEDUCT

Constructed and Operated by and for
The Metropolitan Water District of Southern California

February, 1942

The District

The Metropolitan Water District of Southern California is a public and municipal corporation of the State of California, organized, governed and operated in accordance with the provisions of the Metropolitan Water District Act, as adopted by the State Legislature in 1927, and thereafter amended from time to time. The District was organized in December, 1928, and is at present composed of the area of thirteen cities, situated in Los Angeles and Orange Counties. These cities are Anaheim, Beverly Hills, Burbank, Compton, Fullerton, Glendale, Long Beach, Los Angeles, Pasadena, San Marino, Santa Ana, Santa Monica and Torrance.

The state act, under which the District has been established, contains provisions authorizing the annexation of additional areas. Several cities and unincorporated areas on the Southern California Coastal Plain are now considering annexation to the District.

The purpose and function of the District is to plan, finance, construct and operate a water supply system to deliver water from the Colorado River to the cities and areas in the District on a wholesale basis. It is the policy of the District Board of Directors to restrict the delivery and distribution of this water supply to areas within the territorial boundaries of the District.

District Government

The District is governed by a Board of Directors. Each city in the District is represented by at least one director. The Metropolitan Water District Act provides that the voting power of each member of the Board shall be determined in accordance with the assessed valuation of the city whose area he represents, and contains the further provision that regardless of its assessed valuation, representatives of no one city shall exercise more than 50 per cent of the voting power of the Board of Directors. At the present time, there are nineteen members of the Board of Directors, Los Angeles being represented by seven directors, and each of the other twelve cities by one director.

Water Needs of South Coastal Plain

Southern California is a semi-arid region. During the past several years this territory has received rainfall in excess of normal precipitation, but the average rainfall on the Southern California Coastal Plain over the past 60 years has amounted to about 15 inches annually. This is considerably less than is required for normal agricultural, comestic and industrial uses in the area affected, and falls far short of the amount required to encourage and support continuing development in future years.

When intensive agricultural and urban development was set under way on the South Coastal Plain some 50 years ago, this area possessed what at that time appeared to be well nigh inexhaustible underground water reserves which had been accumulating during the past hundreds of years. Many sections were watered by free flowing artesian wells. However, for a number of years, except during an occasional above-normal rainfall season, water users on the Southern California Coastal Plain have been pumping out of these underground water reserves and using an average of about 200,000,000 gallons of water per day more than has been replaced. The result has been a depletion of local water resources. Artesian wells long since have ceased to flow, and in some 47 square miles of territory along the coast salt water intrusions have destroyed valuable fresh water underground basins.

It thus became evident some 20 years ago that a large and dependable supply of additional water urgently would be required permanently to sustain existing development, and to insure future expansion of urban territory. The only available source of such a water supply was and is the Colorado River.

Water Rights

Pursuant to the "Santa Fe Compact" of 1922 and the Boulder Canyon Project Act, the District has contracted with the United States for water from the Colorado River in the ultimate amount of 1,100,000 acre feet per annum..Supplementary applications for appropriation of the same water under California law are pending in the Department of Public Works, Division of Water Resources. Priorities as among California users of Colorado River water were settled by contract (Seven Party Agreement of 1931). Neither the compact nor the act settles the priorities as between California, Arizona or Nevada. There is no reason for difficulty with Nevada, but conflicting Arizona claims require constant and vigilant attention.

The Aqueduct

First Colorado River Aqueduct surveys and studies were started in 1923 by the City of Los Angeles. Following its establishment in 1928, The Metropolitan Water District of Southern California continued and completed these investigations and plans. Basing its proposals upon eight years of exhaustive and comprehensive engineering and economic studies, the District Board of Directors submitted to its electorate on September 29, 1931, a bond issue in the amount of $220,000,000 to finance the construction of the Colorado River Aqueduct. The bond issue was authorized by the voters by a ratio of five to one.

Aqueduct construction work was started in December, 1932, and was carried forward without interruption until the aqueduct, in its initial development, was completed and placed in operation on August 1, 1941. Aqueduct construction work was carried forward during the period of nationwide unemployment and business depression. During the period this work was in progress, more than 38,000 men were provided with constructive and gainful employment directly on the aqueduct line, and during this same period an average of about 25,000 men in Southern California and throughout the United States were provided with employment in the manufacture and handling of the vast quantities of equipment, materials and supplies used on the job.

Aqueduct Financing

Funds required to meet engineering and construction costs were originally obtained by the sale of the District bonds to the Reconstruction Finance Corporation. That corporation has since disposed of all of such bonds and they are now in the hands of the general investing public. The bonds bear an average interest rate slightly less than 4 per cent. The aqueduct project at this time represents an investment of $193,700,000, of which amount approximately $178,000,000 was derived from the sale of District bonds.

How Water is Delivered

The aqueduct's diversion works are located two miles upstream from Parker Dam and about 150 miles downstream from Boulder Dam. Water impounded at Boulder for the District's use is released as needed and permitted to flow down the river channels to the diversion works. It is pumped from the river

and over and through mountain barriers in a series of five lifts, aggregating 1,617 feet, and by means of canals, covered conduits, tunnels, inverted siphons, totaling 398 miles in length, is delivered to the areas within the District. Power for pumping is derived from the Boulder Dam power plant under a contract with the United States.

Principal Aqueduct Features

Parker Dam, creating Lake Havasu on the Colorado River
44 Tunnels, totaling ..... 110 miles
Concrete lined canals ..... 64 miles
Covered concrete conduits ..... 54 miles
Inverted siphons ..... 29 miles
Distributing mains ..... 138 miles
Lake Havasu ..... 717,000 acre feet
Lake Mathews ..... 107,000 acre feet
Palos Verdes Reservoir ..... 1,000 acre feet
Four other reservoirs, totaling ..... 157,000 acre feet
5 pumping plants, total lift ..... 1,617 feet
Power transmission line from Boulder Dam to five pumping plants, 237 miles in length, operating at 230,000 volts
Softening and Filtration Plant, initial capacity 100 million gallons per day
Total length of aqueduct system, including 3 reservoirs and 5 pump deliverylines, as well as the water carrying features above listed, is 398 miles. Ultimate capacity, 1500 second feet, or approximately one billion gallons daily.

District Board of Directors and Staff Officers

W. P. Whitsett, Chairman
Franklin Thomas, Vice-Chairman E. P. Hapgood, Secretary

Anaheim, E. P. Hapgood
Beverly Hills, Arthur Taylor
Burbank, James L. Norwood
Compton, Warren W. Butler
Fullerton, Walter Humphreys
Glendale, Herman Nelson
Long Beach, W. M. Cook
Los Angeles, Otto J. Emme
Los Angeles, Perry H. Greer
Los Angeles, Joseph Jensen
Los Angeles, D. W. Pontius
Los Angeles, John R. Richards
Los Angeles, V. H. Rossetti
Los Angeles, W. P. Whitsett
Pasadena, Franklin Thomas
San Marino, John H. Ramboz
Santa Ana, S. H. Finley
Santa Monica, Samuel G. McClure
Torrance, Charles T. Rippy

Julian Hinds, General Manager and Chief Engineer
James H. Howard, General Counsel J. M. Luney, Controller
Ira R. Pontius, Treasurer
District Headquarters: 306 West Third Street, Los Angeles, Calif.

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JOINT MEETING OF THE DIRECTORS OF
THE METROPOLITAN WATER DISTRICT
and the
COMMISSIONERS OF THE DEPARTMENT OF WATER AND POWER

November 20, 1942

President Heffner and Gentlemen:

We welcome you to this joint meeting. We of the District Board have always felt that our interests and objectives are so nearly the same that the closest possible ties and cooperation should be maintained. I have especially felt the necessity for such cooperation and have endeavored to foster it upon every possible occasion.

A start was made in this direction last year at the joint meeting at the Biltmore Hotel which was initiated and sponsored by Director Taylor. The good start made at that time seems to have lost its momentum. This has probably been due to the fact that all of us are extremely busy, not only in official matters but with our personal affairs, and unless some compelling and specific matters are pressing we are reluctant to devote time to additional meetings.

Originally the Directors of the District representing Los Angeles were also Commissioners of the Department of Water and Power. Mr. Richards and I were on both Boards at the time the District was organized. At the time the Mayor asked that the two Commissions be separated there may have been good reasons for it. However, fundamentally our problems are your problems.

You as Commissioners of the City of Los Angeles have a 68 per cent interest in the water which the District will bring to this Coastal Plain and to 68 per cent of the cost. However, aside from that, the City of Los Angeles is vitally concerned in the water of all Southern California. You are just as interested in seeing that Orange County, which is the back country on which you eat, has an assured water supply as that you have one yourselves. It was the vision of this broad picture which led W. B. Mathews, Bill Mulholland, and our own General Counsel, Jim Howard, to conceive the set-up which permits widely separated communities of different characteristics to join in a common enterprise for their mutual benefit.

We have some specific problems and some general problems that we want to talk over with you today. We intend

to express ourselves frankly and hope that you will feel privileged to do the same. I personally hope that this meeting will lead to others in which we may have the benefit of your knowledge, experience, and cooperation in solving our mutual problems.

In order to start the discussion I am going to ask Franklyn Thomas, Chairman of our Water Problems and Public Relations Committee, to present to you the problems of the District, for which this meeting was called, and to lay before you some of the background.

* * * * *

DINNER HONORING SAMUEL G. McCLURE,

On Occasion of His 80th Birthday
Santa Monica Del Mar Club
August 9, 1943

Mr. Chairman, Mr. McClure and Fellow Guests:

It is indeed a privilege which I deeply appreciate to be chosen among those to pay verbal tribute to my old friend and associate, Samuel G. McClure, whom all of us are assembled to honor this evening.

Each of the speakers has had his own particular association with this distinguished citizen. Mine has been the good fortune to serve with him through many years as a Director of The Metropolitan Water District of Southern California. Mr. McClure has been accorded the unique distinction of having been chosen by TWO of the most progressive of our member cities to represent them on this Board of Directors. Representing Glendale in 1932, he carried a large share of the tremendous burden of getting the construction of the Colorado River Aqueduct started.

Those were difficult years. The depth of the depression was on us with the misery and desparation of unemployment, poverty and industrial stagnation. The search for the mythical Prosperity reported to be "just around the corner" had given away to despair.

Now, you know Mr. McClure is by profession a newspaper publisher. As such he is fully aware of the power of the printing press - a power he has used so constructively in the molding of an enlightened public opinion. But, being a man of clear vision, sound principals and courageous conviction, he is also aware of the limitations of the printing press. I mean that he knows the answer to the question recently posed by Samuel Pettingill - "Can the Government print a cow?"

Mr. McClure knew back in 1932 that the Government could not print prosperity. He knew that if we were to have prosperity it would have to be created by honest-to-God work on wealth-creating projects. Here, on the semi-arid coastal plain of Southern California, water is the determining factor in our growth and development. So Mr. McClure put his best efforts into the gigantic task of starting the construction of the Colorado River Aqueduct which furnished employment for more than 30,000 men, directly and indirectly, through the worst years of the depression in the creation of new wealth. This project, completed just six months before Pearl Harbor,

by making available the necessary water and power, has brought to Southern California the great National Defense Industries which are the source of our present prosperity and so vital a part of our war effort. Surely the timing of this work can be considered nothing short of Providential.

It was Mr. McClure who, returning from Europe in 1932, joined Directors Honnlad, Bullock Greer and myself in Washington and secured from the R. F. C. the first $40,000,000 loan for the Aqueduct construction.

With engineering plans completed and funds available, the Board then faced the problem of choosing between the contract method and the force account method of construction. It was Mr. McClure who took a large part of the leadership on the Board which resulted in the adoption of a plan whereby both methods were harmoniously employed. This decision was one of the most important ever made by the Board. The competition between the two methods resulted in incalculable economies. Each method was on the spot and knew it and the spirit of rivalry permeated from top to bottom of both the Contractors' and the District's organizations. They watched each other's progress and their unit costs. There could be no alibis and it was a fight to the finish. This is one reason we were able to eomplete the Aqueduct for Twenty Million Dollars under estimated cost.

Later, while our construction was in full blast, Mr. McClure moved from Glendale to your fair City of Santa Monica, resigning as Director from Glendale. Several years laterm upon the death of Arthur Creel, your city administration made the wise move of appointing Mr. McClure as his successor. He took his old seat on the Board and immediately took up with his accustomed vigor and penetrating analysis the tasks confronting the District just as if he had never been away. Some of the faces of his old associates were gone. The problems were new and different but we at once began to feel the contribution of keen understanding and vast experience.

In a certain sense I am in error in saying that he was ever away from our Board. Physically he was absent but I know that he was always with us spiritually. In the columns of his newspaper, in his position of leadership in the community, and in his broad associations I know that he was ever devoted to the task of obtaining for

Southern California a permanent, controlled water supply which is so vital to its continued growth and prosperity. And I must add that, like all other members of the Board, Mr. McClure served entirely without remuneration.

Mr. McClure's services on our Board is but one of his many valuable contributions to the social and civic life of California. Others will tell of his various activities. I know that I express the unanimous opinion of our Board when, as Chairman, I say that each of has profited by our association with this wise and generous man to whom our State owes a lasting debt of gratitude.

* * * *

COASTAL MUNICIPAL WATER DISTRICT CELEBRATION

FEBRUARY 22, 1944

Mr. Chairman, Citizens of the Coastal Municipal Water District, Ladies and Gentlemen:

It gave me special pleasure to accept the invitation to come to Laguna Beach this afternoon. For your beautiful little city recalls many happy memories of restful days spent here at "Mariona," the home of the late Frank Miller and his gracious wife who used to come in summers past from Riverside to enjoy your cool ocean breezes! During those visits, Mrs. Whitsett and I came to know and love this picturesque city-by-the-sea and all its nearby points of interest - especially Mission San Juan Capistrano. And when I want to impress Mrs. Whitsett's friends from Florida with the superior beauty of California's beaches, I bring them to your Victor Hugo's terraced gardens.

On this occasion, it is my privilege to welcome you to membership in The Metropolitan Water District of Southern California and to congratulate you on the wisdom of this step you have taken to insure an adequate water supply for your fast-growing community. And, further, we want to compliment you on your choice of Judge C. C. Cravath to represent you on our Board of Directors. His enthusiasm, understanding and appreciation, as well as his forthright sincerity of expression have already made him a valuable member of our Board.

The basis, the measure and the determining factor of present and future growth and development is water - a permanent, adequate controlled supply of water, available during periods of drought as well as during normal rainfall years. We have well-authenticated records of two of these droughts, each lasting 11 years. The most severe one was from 1821 to 1832. The latter one - from 1893 to 1904 - we know more about. The average fainfall for those 11 years was 11½ inches in Los Angeles where the normal rainfall is 15½ inches. The most devastating period of this drought was just prior to 1900 when, for three years the average rainfall was just over 6 inches.

This prolonged drought was the compelling factor in the starting of the Owens River Aqueduct. On the anticipation of that added water supply Los Angeles doubled her population from 1900 to 1910. And on the realization of that additional water supply she again doubled between 1910 and 1920 and again between 1920 and 1930.

This unprecedented growth meant we would soon need a new water supply - this time from the Colorado River. The

Colorado River Aqueduct was started in the depth of the depression in 1932, furnishing wealth, creating employment directly and indirectly for over 40,000 men. During these years, the depression and unstable world conditions slowed down our population growth; but the finishing of the Aqueduct in 1941 just before the disaster of Pearl Harbor has made possible the great defense industries located on the coastal plain of Southern California as well as the many training camps here and along the aqueduct through the desert!

Truly this is a great providential project.

So I predict for Laguna Beach, a doubling and redoubling of your population, made possible by your new supply of water. For like produces like under similar conditions.

Nowhere else in the world can be found those favorable conditions of climate - rich soil, ocean, desert, mountain and valley - in such close proximity to each other as here on the Coastal Plain of Southern California. This infinite variety, interspersed with prosperous modern cities is what the human family is looking for - they know it is here - and when the war is over, you are ready for them!

Mr. Don Kinsey, assistant to our General Manager, Mr. Julian Hinds, has so successfully combined much of the history of this great Colorado River Project with the beauties of the desert that I know the picture will be more interesting than anything I can tell you.

Don, stand up and take a bow -

Now, show us your picture!!

PREMIER OF THE DISTRCIT'S MOTION PICTURE

"THEY SAW TOMORROW"

Patriotic Hall, 1816 South Figueroa Street

June 10, 1943

Ladies and Gentlemen:

During the last week it has been my privilege to cross this great continent of ours from the Atlantic Coast of Florida to our own Pacific Coast - a distance of 3,000 miles.

Making this trip within four days gives one an opportunity to take a fairly comprehensive mental picture of this vast territory, noting the contrast between East and West.

From East Florida through Louisiana, the first 1,000 miles of the journey, one sees too much water everywhere - swamps, hummocks, bayous, rivers flooding at this season from the overflow of their Northern tributaries, great fields where drainage ditches are the most important factors in farming and still greater fields where rice is grown under water.

Then Texas - another 1,000 miles which is an empire unto itself - one-third belonging to the semi-tropical Southland and two-thirds to the semi-arid Southwest. From Houston on through West Texas, New Mexico, and Arizona, 2,000 miles Westward are mostly grazing lands, vast arid areas where cattle, sheep and goats graze and brouse, dotted here and there by cities where available water has been corraled in sufficient quantity to make modern living conditions possible.

Only after coming through 2,000 miles of this semi-desert country can one fully appreciate the oasis which bursts into view at Redlands, the beginning of Southern California's irrigated country where water has literally transformed our naturally semi-arid lands into a Garden of Eden.

Such a land was the original Garden of Eden - that rich valley of the Tigris and Euphrates between the vast deserts of Persia and Arabia.

Today modern engineering has made it possible to import a water supply adequate for ten million people where Nature had provided less than enough for one million - making possible a permanent Garden of Eden on the Coastal Plain of Southern California.

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REPORT OF W. P. WHITSETT

ON RETURN FROM TRIP TO WASHINGTON

TO BOARD OF DIRECTORS

April 14, 1944

The most effectual place to concentrate our efforts to defeat the Nexican Treaty is in the Foreign Relations Committee. However, with the Committee hearing set for next week, it is essential that we start at once to build our second line of defense by lining up support of our case when the treaty is presented on the floor of the Senate for ratification. The legal and moral issues involved are all on our side and they will be ably presented by our General Counsel and the representatives of our associated agencies in Washington. Likewise our case is being given splendid press notices through our efficient public relations department. But in Washington, regardless of what the case involves or who presents it, it becomes a political issue to thos who think only in terms of political strategy. Therefore, we must face the political factors in our case and mobilize as quickly as possible those in our favor.

The Foreign Relations Committee consists of 15 Democrats, 8 Republicans and Independent La Follette of Wisconsin. Immediate steps should be taken to contact the following: Elbert Thomas of Utah, James Murray of Montana and Guy Gillette of Iowa. I mention these senators from the Democratic list because the interests of the States they represent can be shown to tie in with California's economic development, now and in the future. For example, Safeway Stores with headquarters in California is a large purchaser of Utah sugar; Montana, vitally interested in copper production finds its nearest market in California; Iowa has so many of its former influential citizens living here, and other thousands wintering here, that there is a strong bond of common interest.

I would suggest that a list of the members of the Foreign Relations Committee be given each member of our Board of Directors for their consideration and suggestions, with the thought that some of us may have a means of personal approach to one or more of these senators.

Further, the Los Angeles Chamber of Commerce should be asked to compile a list of commodities purchased from the Rocky Mountain States showing the economic importance of the potential 5,000,000 increase in Southern California's population to those states, which growth will be made impossible if this water is given to Mexico.

Of vital political significance is the fact that the State of California has 23 Representatives in Congress, while the other six states signatory to the Colorado River Compact have together a total of only 13. (Arizona 2, Colorado, 4, Nevada 2, New Mexico 2, Utah 2, and Wyoming 1.) Yet those six states have 12 senators who will vote on the ratification of this treaty, while we have only our two senators.

It may be well to remind these states of the fact that all appropriations for the development of water and power resources will have to be approved by the House of Representatives.

In my opinion, the situation in which California finds herself is due to two facts:

1. Division between Northern and Southern California which cancels the power of our Congressional representation.

2. The Water and Power interests of Southern California are tied in with the Committee of Fourteen, which approved the Mexican Treaty. This Committee, in no way, is actually representative of the citizens who are paying for the Boulder Dam and allied projects.

The state Chamber of Commerce and other organizations should be urged to bring about a unification of the 23 Congressmen from California. Only by presenting a united front politically can California protect the vital interests of its rapidly increasing population and secure its rightful position of leadership in any program for the promotion of western development.

I have suggested that George Malone or someone equally qualified be employed to contact the political leaders of the western states to see if this matter cannot be worked out on a mutual basis by showing how vital California is as a market for the products of the sparsely settled western states, and the advantage of preserving western solidarity in competing with the densely populated eastern states.

I discussed these points with Herron, the Los Angeles Chamber of Commerce representative in Washington and with Congressman Hinshaw. Both are interested and cooperative.

Before the treaty is voted upon in the Senate, it is essential that we enlist the interest of Senator White of

Maine who inherited McNary's job as minority leader. Taft and Vandenburg share honors with White, and Wherry of Nebraska (who defeated Norris in 1942) is the Republican whip. These four men can be lined up by our Governor Warren, who is more powerful as a national figure than most of us realize.

The whole matter boils down to securing 33 Senate votes to defeat the treaty. As I see it, the best method to pursue is by personal contact with as many of the Senators as we can possibly reach and influence.

If it seems necessary, I shall return to Washington for the hearing. In the meantime, I invite your suggestions as to ways and means of approach to those Senators who might espouse our cause, and I would feel personally relieved if some other member of our Board would represent us in Washington.

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Mearl
SUCCESS BOND
RAG CONTENT
MADE IN U.S.A.

BEFORE THE FOREIGN RELATIONS COMMITTEE OF THE

UNITED STATES SENATE ON FEBRUARY 8, 1945 IN PROTESTING

RATIFICATION OF THE PROPOSED MEXICAN WATER TREATY

Gentlemen:

My distinguished associates, in opposing the ratification of the proposed Mexican treaty, are presenting to you the legal rights upon which our case is firmly based. They are pointing out the vast economic losses to the United States as a whole which will result from robbing the Southwestern States of water required for thier defense activities and post-war development in order that Mexico may grow more cotton.

The Metropolitan Water District of Southern California, of which I have had the honor of being Chairman since its organization in 1928, is presenting more of these facts through our General Counsel and engineering staff. In the brief time allotted me, I would like to point out one fundamental American principle involved in this treaty which might easily escape the notice of those whose time allows only a casual examination of this vital issue.

Because I know you are as much interested in the human factors involved as in the technical facts, let me sketch briefly the part played by The Metropolitan Water District, which comprises fourteen cities of Southern California, and which, with adjacent areas, have three and one-half million inhabitants.

When Boulder Dam was a blueprint in Washington, the Government refused to appropriate the $125,000,000 for its construction until assured that the cost of the dam, plus interest on the Government money advanced, would be repaid through the sale of power and water made available by the dam. The Government demanded that this repayment be guaranteed by firm contracts. The Metropolitan Water District of Southern California joined with other public and private agencies in California and entered into such contracts with the Government, and these communities thus bound themselves to pay for sufficient Boulder Dam hydro-electric power to satisfy the Government demands.

The Metropolitan Water District, as a matter of fact, bound itself by firm contracts to pay for about 36 per cent of the firm power available at Boulder Dam - and the District agreed to pay for this large amount of hydro-power regardless of whether it actually needed or used the power. Thus the construction of Boulder Dam was brought about and made possible.

With construction of the dam assured, the people of the California cities which comprise the Metropolitan Water District went forward with plans to finance and build the Colorado River Aqueduct. In September 1931, the people of these District cities authorized by a majority of five to one a bond issue of $220,000,000 to finance the initial cost of the giant aqueduct system. These bonds are a first mortgage on all of the real assets of the people in the District cities. This heavy obligation was assumed in order to finance the building of an aqueduct 400 miles in length - an aqueduct which now is carrying water across mountains and desert wastes to supply the ever increasing needs of agriculture, industry, homes and military installations on the semi-arid coastal plain of Southern California.

The job of building the Colorado River Aqueduct included the building of five huge pumping plants required to raise the water a total of 1600 feet before it can flow by gravity into a terminal reservoir and be ready for distribution to the industries, defense establishments and homes situated within the territory of The Metropolitan Water District. To operate the aqueduct pumping plants the District required electric power, and it was for this power that the District bound itself to pay for up to 36% of the total firm output from Boulder Dam. The District did not require any such large amount of power in its early days of operation, and still does not require any such quantity of power; but it nevertheless assured the building of Boulder Dam by contracting to pay for this power whether used or not.

In meeting this heavy obligation our people have never faltered. We had made that kind of contract with the United States in order to bring about the building of Boulder Dam. We had absolute confidence in the good faith of our Government to fulfill its end of the contracts, and we were willing to wait and to continue paying this high premium for insurance for our future protection.

Our first reward has been the great satisfaction of having this great surplus of electric power ready and waiting to serve and activate the giant war industries and military installations which became so vitally essential in Southern California when the massacre of Pearl Harbor plunged this country into war.

Our people have paid dearly for the guarantee we made to our Government in Washington to assure the repayment of the cost of Boulder Dam, but we will never regret the price

we are paying if our Government honestly fulfills its end of the contract to make available to our people the Colorado River water essential to our region in the years ahead.

I have spoken of the heavy obligation that has been assumed by the communities within our Metropolitan Water District to bring about the construction of Boulder Dam. Please allow me to speak briefly regarding the financing of the Colorado River Aqueduct.

To finance the initial construction of the Aqueduct, as I have stated, our people voted in 1931 to assume the heavy financial obligation of bonds in the amount of $220,000,000. Approximately $180,000,000 of these bonds were sold to the Reconstruction Finance Corporation at an initial interest rate of 5 per cent, later reduced to an average of about 4 per cent. These bonds have long since been sold by the R. F. C. on the public market at premiums which returned to the Government a net profit estimated to exceed $13,000,000. Thus, it can plainly be seen that the Colorado River Aqueduct has not been benefited by one dollar of Federal Aid, but on the contrary has contributed heavily to the financial benefit of our Government's treasury.

Once more, permit me to state that our people do not regret their decision to assume the tremendous aqueduct bond obligation. It was essential that this obligation be assumed if the vitally strategic area on the South Coastal Plain of California is to go forward with an orderly and necessary program of development. Our people were ready and willing to take up the full burden of this obligation because they had utter faith in the sanctity and dependability of their Colorado River water contracts with the United States Government, contracts made pursuant to the terms and provisions of the Boulder Canyon Project Act which was adopted by Congress in 1928.

Insofar as the members of the Board of Directors were concerned, let me say that not one of them ever questioned the validity of our water contracts with the Government. It never occurred to any one of us that the time would come when our Government would not keep faith with its own people in the complete fulfillment of its pledged word to make the water available as required.

Realizing the imperative need of our region for the Colorado River water, we enthusiastically advocated the approval of the aqueduct bond issue by our people and the, in turn, as I have previously noted, authorized this bond issue by the decisive majority of five to one.

Incidentally, allow me to point out that no member of the Board of Directors of The Metropolitan Water District has ever received one dollar of remuneration for his time and services on that Board. It has been a civic enterprise on the highest order in which we have been proud as citizens of the United States to participate.

The construction of the Aqueduct was started in 1932, in the trough of the depression, when we were able to choose from the eminent engineers of the United States those best qualified to do this unprecedented job. And those engineers, in turn, were able to secure efficient assistants and provide jobs for 38,000 men at the highest wage of that day and under the best of working conditions.

The Aqueduct was completed in June 1941 - five months before Pearl Harbor. The citizens of the District are proud of this great engineering achievement, not only because it provides life-giving water, which is the prime necessity for the future development of farms and homes for our successors and for returning veterans, in some of the most fertile valleys on God's earth - but because it has made possible the water and power for the gigantic defense plants which are producing planes and ships by the tens of thousands, and other implements of war - the prime necessity of the United States and our Allied Nations today.

I am quite sure, Mr. Chairman, that you and the other distinguished members of your committee will agree when I remind you that the end of this war will not eliminate the continuing need for naval and military installations and for the continuing operations of heavy industrial plants on the Pacific Coast. We have learned, belatedly, that the oceans no longer are effective barriers against aggressor Nations. And, until some world organization far more tangible than any now in operation has been tried and proven, the United States in common prudence must maintain an adequate and ever-ready Pacific Coast defense. Southern California is today and must surely remain a strategic area in this general zone of our Pacific defense.

The Colorado River is the "last water hole" for Southern California. The proposed treaty, in giving to landowners in Mexico the Colorado River water which is vitally essential in the maintenance of an adequate defense in this area, I respectfully submit, reveals a shocking lack of foresight in a Nation which ought to have learned some bitter lessons since December 7, 1941.

President Roosevelt, in his inaugural address, said, "We make mistakes. But they must never be mistaken which result from faintness of heart or abandonment of moral principle." It would be easy to make the mistake of ratifying this treaty unless it were thoroughly studied against a background of all the facts. Such an examination brings out the moral issue to which I would direct your attention.

The Metropolitan Water District of Southern California and other agencies here represented had no "faintness of heart" when they took upon themselves the building of Boulder Dam, the Colorado River Aqueduct, the All American Canal, and mortgaged their homes and farms and their children's homes to pay for them. I ask you if it would not be an "abandonment of moral principle" to break faith with such courageous citizenship?

The United States today is writing, with the blood of our sons and grandsons, across the broad expanse of the Pacific and on the battlefields of Europe, its belief in the principles of freedom, equality and justice for which American patriots of former generations sacrificed their lives and fortunes.

Not only for ourselves do we defend these principles, but for all mankind, and we hold the dream of a world order in which such ideals may ultimately be secured.

In these days of planning for world peace, does it not become our first responsibility to see that justice is administered at home, among the states of our own Union? For any sort of lasting peace must be founded on honor and integrity.

The injustice of giving to Mexico more water than that to which she is entitled, in open breach of contracts by the United States with its own citizens after they have in good faith conserved and planned the use of such waters for the benefit of our nations as a whole, is nothing short of abandonment of moral principle.

Injustice more than any single evil, eats at the heart of manking, and is the hardest o forget or forgive.

The United States is striving to build good will and friendship throughout the world. But real friendship is not made by the giving of material things. It is made by being the kind of individual or nation a neighbor can absolutely trust and depend upon. Good will can never be established by the expediency of injustice - even if the injustice is practiced "within the family."

Foreign relations, I humbly submit, cannot be any better than the domestic policies on which they are founded. And no treaty is any better than the honor of the countries signing it.

You recall that it was Germany that called written agreements "scraps of paper." We see the results today. When any nation, without due process of the law, makes "scraps of paper" out of its own contracts it has taken a long step on the road to chaos.

Such abandonment of principle is hard to justify in the United States today - while our boys are dying to re-establish the principles of justice and humanity, essential to any civilized order.

For the crucial years ahead, when we shall be sacrificing ever more and more in the name of Democracy, Justice and Humanity, calling for the perfect unity and teamwork of every state in the Union, we can ill afford to plant the seeds of animosity between the States of California and Texas. And we should so guard the principle of Justice in our domestic and foreign policies that when we gather one day around a conference table with Mexico and our good neighbors, to talk to and with them about a just and lasting peace for all the world, they may have no cause to mistrust our sincerity.

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Banquet Attended By

REPRESENTATIVES OF THE CITY OF SAN DIEGO,
SAN DIEGO COUNTY WATER AUTHORITY,
U. S. NAVY, AND THE METROPOLITAN WATER DISTRICT

El Cortez Hotel, San Diego, California
November 25, 1945

On behalf of the Board of Directors of The Metropolitan Water District of Southern California, I wish to express to you our sincere thanks for your bounteous hospitality and for your good offices in giving us an opportunity to see at first hand much of the area now within your Water Authority, and your existing facilities. In traveling over this beautiful section of California, one is tremendously impressed by the growth and development that has taken place during the past few years. You have the soil and the climate that invites healthy and continuing expansion. You have the people to provide the manpower to carry forward a great program of prosperous development. I need not tell you that you require only the basic necessity of water - a dependable, permanent and adequate supply of water - to give you the golden key that will open the doorway to a future of security and continuing growth.

There is one hard and fast law of the old Southwest that still remains in full and positive control. It is a law and rule that always controls the destinies of men who live in a semi-arid desert region. It is the law of the water hole. And under this law our people have learned - sometimes to their sorrow - that there is rarely sufficient water available to supply fully the wants of all. In every semi-arid region we find that some of the people are willing and ready to stake their resources in a plan of action that will assure them an adequate and fair share of the precious substance of life from the water hole within their territory. And there are usually others who are reluctant to face the hard, cold facts. They sometimes seek to convince themselves, and others as well, that no extraordinary effort is needed on their part to obtain the water that is so essential. And then it almost always turns out that there is not enough water in the water hole to meet fully the needs of all. And for this reason it usually develops that the last ones to reach the water hole find themselves out of water - out of luck.

Southern California, in common with all semi-arid regions, is a land that is visited at intervals by devestating droughts. It is the visitation of these droughts that usually awakens the people of vision and energy to action. We have learned that we cannot build our communities on the expectations that years of normal or above normal rainfall will

continue to bless us. We have learned that we must plan and prepare for the years of drought. This lesson was driven home to the Los Angeles metropolitan area shortly after the completion of the Owens River Aqueduct. It was even more apparent in the late 20's, when for several seasons the towering peaks of the Sierras lay barren of snow. In those years Los Angeles was forced to take extreme steps to draw from underground basins locally and in the Owens River Valley every drop of water available. In those years the great metropolitan afea of Los Angeles frequently found itself with only a few days water supply on hand and available for its homes, its groves and its industries. Had the drought extended over one more season the Los Angeles area would have suffered property and business losses amounting in one year to many times the cost of the Colorado River Aqueduct that later was financed and built.

It is because men in portions of California have possessed the courage and have been willing to stake their fortunes to provide against drought by the building of great and costly water supply systems that California has gone forward with an ever accelerating pace in our country's march of progress. As we look back over the past twenty years we see that when the cities of The Metropolitan Water District planned, financed and built the Colorado River Aqueduct, they must have been guided by the hand of Providence. The Aqueduct was financed and built during the dark years of depression. It took faith in the future of Southern California to do that kind of a job back in those hard, lean years. And it required an enormous investment of money. But the people of the cities which comprised the Metropolitan Water District pressed forward with the great aqueduct project. The aqueduct was built - and it was placed in operation in the summer of 1941. A few months later America was plunged into the war. Southern California found itself on the front lines of a terrible struggle that swept over the boundless width of the Pacific. There arose the sudden need for the concentration within this western area of millions of fighting men. There came the imperative need for gigantic industrial operations. For all these there had to be the assurance of such a water supply that the Metropolitan Aqueduct could provide - an ample and dependable supply. There is no need to review the history of the past four years. We all know what was accomplished and how the efforts of this section of America helped so materially to bring victory to our cause.

During those years this region was blessed with seasons of above normal rainfall, but there was no assurance

that this above normal rainfall would continue from season to season. And the Coastal Plain of Southern California would never have dared to embark upon such an ambitious program as it did assume merely on the hope that rain would come.

The end of the war finds California heading straight into an era of unprecedented expansion and development in every field. California during the past few years has firmly established itself as a leading state in population growth, in the value of its agricultural products, in the expansion of its industries. In California the trend is definitely and certainly a trend to greater and ever greater development.

In January of this year the estimated population of California was 8,842,000. It is exceeded in population by only two other states, New York and Pennsylvania. In 1944 California led every state in the Union in the cash value of its agricultural products. The annual per capita income of the people of California mar exceeds the national average and is topped only by the per capita income of the people of Connecticut.

Leading most other parts of California, at the present time, in population growth, in the individual earnings of its people and in the value of retail trade are the counties of Los Angeles and San Diego. In population Los Angeles County leads all others, with an estimated population of 3,441,000, and standing fourth among the state's 58 counties is San Diego with an estimated population, I am told, of 460,000.

The only other two counties now exceeding San Diego are San Francisco and Alameda. In the buying power of its people and in retail sales, we find San Diego once more fourth among the 58 counties of the state, topped only by Los Angeles, San Francisco, and Alameda counties, in that order.

The signs of the times are plain and unmistakable - all, or a large part, of Southern California is heading straight for a passage to unprecedented progress and prosperity. To make this passage into a future of security and continuing development, every community in this part of the state must obtain its own ticket. This ticket takes the form of a guaranteed and adequate water supply. The areas, the people, who have had the foresight and the plain common sense to reach out and invest in this ticket of passage, these areas and these favored people, will surely be on their way - with a clear track ahead. Those who hesitate - those who stand waiting for a free ride - those will be the ones who will find themselves hopelessly stranded on a desert sidetrack.

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BEFORE THE CALIFORNIA STATE CHAMBER OF COMMERCE
JOINT SECTION MEETING ON WATER AND NATURAL RESOURCES

San Francisco - December 4, 1946

It has been suggested, I understand, that I speak to you on the subject of "Water for the New California." In approaching this vital and basic subject I feel strongly that we need to extend our view to a broader zone that that which includes only the geographical area of California. At the very outset we come to the realization that the subject with which we must be concerned is the problem of water and the Pacific area of the United States.

So far as this Pacific area of the United States is concrened, there are two kinds of water that have shaped - and will continue to an even greater degree to shape - its destiny. First of all, there is the limitless mass of salt water upon which this portion of America fronts. It is the Pacific Ocean. And as we look out across the tremendous reaches of this ocean we see those portions of the earth's surface where in the fortunes of this western land will be worked out for good or for ill in the years ahead. We see this destiny of ours in the potentials of trade and development in South America, in Alaska, in the contless islands of the Pacific, in Australia, and in the enormous population and land masses of Pacific Asia.

It now appears, at long last, that the American people are awakening to a rapidly broadening realization that in this Pacific arena - to a very large extent - there lies the answer to the fate of these United States - and, indeed, the whole world. To meet this challenge of the world of today and tomorrow, the people of America, as though guided by the hand of Providence, have turned their eyes toward this far western territory. By the thousands, by the hundreds of thousands, yes, by the millions, people from every part of the United States are moving into this western region. Consciously or unconsciously they are preparing themselves to be the writers of a new chapter in the story of our civilization.

For reasons profound and compelling a large part of this westward migration continues to head toward that portion of the Pacific Area that is called California. There is not the time - here and now - to discuss in detail the reasons for this trend in westward migration. But the fact is that such a tremendous population move continues to be under way. And that fact confronts us with the need to give increasing consideration to the second kind of water with which this area must be concerned. It is fresh water - water required to sustain life and support growth in this territory.

In the northern part of California - and to a lesser degree in the central portion of this state - Nature provided the land with water in a fairly generous measure. In these sections of the state the water problem in a large degree, is that of controlling, conserving and distributing the water at hand. But in the southern part of California, Nature failed to provide the water needed to support the population and economic structure that even now esixt there, to say nothing of the great quantities that will be required to sustain the people and the economy of the future. It is a startling fact that only one per cent of the state's water, exclusive of the Colorado River, is tributary to that portion of the state south of the Tehachapi Pass, and yet this portion of California represents one-half of the business, industrial and land values of the entire state, and within this same area there live more than one-half of all the people of the state. To support the people who now reside in Southern California, to support agriculture, and the business, industrial and home values that now exist in Southern California, it has been necessary for its people to reach far out to distant rivers and import through giant aqueducts the water so vitally needed.

First, there was the Owens River aqueduct, financed and built by the City of Los Angeles. This water supply system called for an initial investment of $24,500,000, and it represents today an investment of more than $90,000,000. Its cost in all particulars has been borne - and will continue to be borne - by the people of Los Angeles - the people it serves.

But the Owens River aqueduct, built to serve only those people within the corporate limits of Los Angeles, could not also meet the water needs of nearby communities. And, furthermore, more than twenty years ago the people even of Los Angeles came to realize that additional water would be required by them to meet their needs in recurring periods of drought and to satisfy the requirements of an increasing population and expanding industry. Thus it came to pass that there was organized in 1928 The Metropolitan Water District of Southern California. This water district now includes 22 incorporated cities and several local water districts. Within the boundaries of The Metropolitan Water District are about 3,000,000 people, and it has a total assessed valuation of $2,700,000,000. The Metropolitan Water District has built and is paying in full for the Colorado River aqueduct. This is the largest and longest sinfle water supply line in the United States. Its initial cost was approximately $190,000,000. Ultimately it will be capable of

delivering to the Coastal Plain of Southern California one billion gallons of water a day. That is enough water to meet the needs of about 7,500,000 persons.

This aqueduct was built very largely during the depression years of the thirties, when Government aid was being extended to all manner of projects regardless of their ultimate economic value. But the Colorado River aqueduct was not a Government aid project. It was built from the proceeds of a bond issue of $220,000,000 voted by the people of The Metropolitan Water District.

The cost of retiring the aqueduct bonds, with interest, and the cost of operating and maintaining the aqueduct system is being borne solely and entirely by the people of The Metropolitan Water District - the people served by the aqueduct. And that is the way it should be. But that is not all. Far from receiving any gratuities from the Government, the people of The Metropolitan Water District have paid the Govern ment handsome profits for its participation in the aqueduct project. These profits have been paid the Government in two ways:

First, the District sold its aqueduct bonds to the Reconstruction Finance Corporation. Later the R. F. C. sold these same bonds to the public, and as a result realized a profit of about $14,000,000 on the deal.

Second, the District asked the cooperation of the Government in the building of Parker Dam below the Intake of the Colorado River aqueduct. Construction of this dam cost approximately $7,300,000, and the Government through its Public Works Administration supplied $600,000 or about 8 per cent of the total cost. The Government retained the perpetual right to 50 per cent of all the hydroelectric power available from Parker Dam. That amounts to 50,000 kilowatts, and from this energy the Government is now realizing a net of $300,000 a year. That will amount to a profit of $15,000,000 over a 50-year amortization period. That was a very smart investment by the Government. Need I say that the people of the United States would be in better shape today if all of the P. W. A. spending had been one-tenth as profitable.

Keystone of Colorado River development is Boulder Dam. And here, once more, we find a project that is being paid for, in full, by the people who are today actually utilizing its water and power resources. The law authorizing the building of Boulder Dam by the Government contained the provision that its building could not be set under way until the

Secretary of the Interior held firm contracts for the sale of water and power sufficient to repay the cost of the dam and power plant, with interest, within a period of fifty years. Repayment of $25,000,000 of the cost of the dam was allocated to flood control and will be repaid out of revenues later. The Metropolitan Water District joined with other public and private power agencies in Southern California in signing the necessary contracts with the Government; in fact, the District contracted to pay for, whether used or not, 36 per cent of the firm power produced at Boulder Dam. Ultimately this large block of power will be required to operate aqueduct pumping plants. In the early years of aqueduct operation only a small fraction of the power is needed by The Metropolitan Water District. And in the early years of Boulder Dam operation the Metropolitan Water District paid over to the Government the amount of about $4,500,999 for Boulder energy which it did not use and which was not sold to any other agency. Thus the Metropolitan Water District has been one of the principal underwriters of the Boulder Dam project, and has paid a premium of $4,500,000 to the Government, in addition to the money it has paid for power which it actually has needed and has used. The people of The Metropolitan Water District paid that $4,500,000 premium to the Federal Government for unused power because they had entered into a contract with the Government pledging themselves to pay the money. It is to be hoped that the officers of the Federal Government will be equally honest and faithful in meeting in full their contracted pledge to make certain specified Colorado River water and power deliveries to the people of Southern California.

I have referred to the major steps that have been taken in Southern California to obtain from far distant sources the water that is essential to the life of this part of our country's Pacific area. So far as the future is concerned, the life and continuing economic stability of this western territory is dependent entirely upon the available resources of the Colorado River. In Northern and Central California there also exists today and there will always exist the basic task of developint and maintaining adequate water supplies for agriculture, industry and homes. The sources of water may be different, but the task and the problem of providing adequate supplies of water for the established civilization of today and of tomorrow - these are tasks and these are problems that are common to all sections of California.

They are tasks and problems that can successfully be performed and can properly be solved only if the people of California are wise enough to act as a unit. For these water problems have not yet been solved.

problems have not yet been solved.

For example, in Southern California, tremendous investments have been made, costly works have been built, to utilize a fair share of the water and power resources of the Colorado River. And the delivery of this water and power is pledged by the Government in contracts of long standing. But today we find that these Colorado River water rights of communities situated in California - these water rights are being threatened by a host of new water diversion projects now being promoted by various interests, including agents of the Federal Government. The truth is that the United States Bureau of Reclamation has issued a report listing 134 potential new Colorado River projects, and in this report the officers of the Government admit that if these proposed projects were to be contructed they would call for the diversion and use of 25 % more water than is actually available in the river, taking into account the rights of projects now in operation. The Bureau of Reclamation takes the position that all of the listed projects cannot be developed, and calls upon the states of the Colorado River basin to screen and select projects and agree upon division of the available water. The competition for projects creates a grave danger of over development. The United States Bureau of Reclamation estimates that the cost of these 134 proposed new projects will amount to $3,460,000,000.

This danger of overdraft on the water of the Colorado River was sorely aggravated by the action of the United States Senate in ratifying the Mexican water treaty as it was submitted. This treaty guarantees to Mexico for all time 1,500,000 acre feet of Colorado River water annually. California communities opposed the ratification of this treaty because it gives to Mexico an unjustifiable quantity of Colorado River water. But Government agents and certain other areas in the Colorado River basin supported the treaty. And it is from these same sources that there comes now the request for the development of many of these 134 proposed new projects - projects which, if they are authorized and built, will disastrously overdraw the remaining available water of the river.

Colorado River control and development thus far has been made possible almost completely by financial investments and commitments of communities and firms which happen to be in Southern California. These Southern California investments and commitments in Colorado River Development now amount to $533,000,000. That is the bill which Southern California communities are obligated to pay for feasible, practicable and operating water and power works on the Colorado River. Our

people are willing and ready to meet this heavy obligation because the projects for which these investments have been made are feasible and necessary. The projects include Boulder Dam and power plant, the All American Canal in the Imperial and Coachella Valleys, the Colorado River Aqueduct, and Boulder power transmission systems. An it is, I submit, unreasonable and grossly unfair to have these established self-sustaining projects subjected to water and power losses in order to set up other new projects whose feasibility in most cases have not been and cannot be demonstrated.

The people in the Colorado River basin who have pioneered the gigantic task of controlling and developing the resources of the river for the service of mankind - these people have supported and carried forward river projects that have paid their own way. The people of the United States have a right to insist that this policy be continued with regard to further Colorado River projects. When a new project for Colorado River water diversion is proposed the taxpayers of the United States have a right to insist that it meet the test of feasibility. They have a right to insist that it prove its ability to pay its own way.

The days of boondoggling in costly uneconomic public works ought now to have passed. There should be no place in the water hungry communities of Western America for billion dollar white elephants disguised as water projects.

There is need - there is grave need - in the communities of the Colorado River basin and the South Pacific area for every gallon of water within economic reach of this Southwest region. And there is not enough water available to justify its dissipation on projects where the use of the water will not be of sufficient economic value to permit the full repayment of the project cost.

Here in California we have in all sections of the state a common and an urgent interest in the development and protection of our respective water rights. It is of vital interest to each section of the state that the legitimate rights of all parts of the state be safeguarded and properly advanced. There are no reasonable grounds for a division of our people on the basic subject of water. There are no reasonable grounds for the division of our legislators in Sacramento and in Washington in so far as the water rights of California are concerned.

California is a part of the Pacific area of the

United States. If the United States is to realize its destiny at home and in the broad reaches of the Pacific, we must retain here in this territory the basic water rights we have thus far secured - and for which we are paying in full.

Our future security and our fate as an essential sector of America's western front can and will be measured in terms of water.

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